Chapter NR 243
Response to Comments

I. Legislative Rules Clearinghouse Comments

All changes requested by the Wisconsin Legislative Council Rules Clearinghouse have been made except as explained below:

1. Comment: While it appears that the rule makes fairly substantial changes to the existing rule, it does not appear that the changes are so extensive as to make the rule unreadable if drafted with striking and underscoring. In fact, many of the changes are the creation of entirely new text. Preferably, the rule should be drafted to show the precise changes it makes to current law, through the creation, amendment, renumbering, and repeal of text.

Response: No change made to the rule. Information on changes has been added to the rule analysis. The Department initially attempted to draft the rule with redline/strikeout but found that the changes that were made were extensive enough to warrant repeal and recreation. The Department has modified the rule analysis to include how the proposed changes affect current law.

2. Comment: The rule defines many more terms than is necessary or appropriate.

Response: No change made. Historically, members of the public and the regulated community have requested that the Department place definitions in one section for easy reference and to assure statewide consistency.

3. Comment: The rule incorporates a large number of documents by reference. It might be helpful to include a provision similar in format to s. NR 600.10.

Response: Change made.

4. Comment: "Haylage," used in the definition of "raw materials," appears not to be a legitimate word; it does not appear in the unabridged versions of either the Webster's New International Dictionary or the Oxford English Dictionary. Why not just use "hay"?

Response: The term haylage has been retained in the code. Haylage is a common and specific term used in agriculture to distinguish between hay that is cut and used for other purposes and hay that is stored in a partially fermented state for animal feed.

5. Comment: Can the definition of "reviewable facility or system" be replaced with a definition such as "…a facility or system subject to review and approval by the department under s. ___"?

Response: No change made. The definition proposed in the comment creates a circular definition and does not provide the necessary general information on what types of systems are subject to Department review.

6. Comment: The definition of "unacceptable practice" should simply be "…a practice identified in s. NR 243.24 (1)."

Response: No change made. The definition is in the existing code language.

7. Comment: The note to s. NR 243.12 (3) refers to various forms. If these forms are available on the department's website, the note should indicate this.

Response: The location of the application and other forms on the website is subject to change and has not been included in the rule. Information on the most up to date website location is included in informational materials provided by the Department.

8. Comment: Section NR 243.121 (3) provides that the department must specify criteria for determining eligibility for general permit coverage in the WPDES general permit. If these specific criteria are of general applicability, they would meet the definition of the term "rule" in s. 227.01 (13), Stats., and should be included in the text of NR 243.

Response: No change made. The Department does not typically specify eligibility criteria for coverage under a given WPDES general permit as part of a code. Those criteria are determined through the issuance process for the given WPDES general permit, which includes an opportunity for public comment.

9. Comment: The inspection, maintenance, and record keeping requirements of s. NR 243.19 are not optional, so why are they referenced as a condition in s. NR 243.13 (2) (a)? See also s. NR 243.13 (3) (b).

Response: No change made. Under federal law, discharges are not allowed from the production area to navigable waters unless inspection and other requirements are also met.

10. Comment: It appears that s. NR 243.13 (4) (b) should apply to all large CAFOs, not just those housing horses and sheep. If this is the case, it should be moved to s. NR 243.13 (5).

Response: No change made. There are separate code provisions that apply to other operations that production area discharges comply with water quality standards.

11. Comment: Section NR 243.14 (4) uses the term "SWQMA" whereas the defined term is "WQMA." Later provisions use the term "WQMA." The defined term should always be used.

Response: No change made. SWQMA and WQMA each have individual definitions and are purposefully used differently in the code.

12. Comment: The note following s. NR 243.142 (3) conflicts with s. NR 243.142 (3) (intro.). The note, cross-referencing s. NR 243.142 (2) (a), states that department approval is not required for the transfer of responsibility for de minimus amounts of manure. Section NR 243.142 (3) (intro.), however, states that department approval is required for *any* transfer of responsibility, and s. NR 243.142 (2) (a) does not provide an exception.

Response: No change made. Section NR 243.142(3) states that Department approval is only required for distribution of materials under pars. (b) to (e), not de minimus amounts distributed under par. (a).

13. Comment: The title of s. NR 243.15 is "Submittal and approval of proposed facilities or systems," but only the first subsection addresses that topic; the remaining subsections relate to design requirements. Subsections (2) to (10) should be placed in a separate section.

Response: Partial change made. The title of the section has been renamed "Design, submittal and approval of proposed facilities or systems." Given that these actions are closely tied together, the Department has kept them together in the same section.

14. Comment: In s. NR 243.15 (1) (a) 2., more precise references should be provided, rather than referring to all of chs. NR 811 and 812.

Response: No change made. Chs. NR 811 and 812 are under revision and sections may be renumbered.

15. Comment: In the third sentence of s. NR 243.15 (3) (i), how is it determined whether "at the time of permit issuance" or "prior to November 30 after permit issuance" applies?

Response: No change made. The code identifies that the determination would be made through the permit issuance process.

16. Comment: Section NR 243.23 only repeats the requirements of other rules and so should all be placed in notes. The notes might appropriately follow s. NR 243.21.

Response: No change made. This is existing code language and the Department is not proposing changes to sections that are related to livestock performance standards and prohibitions.

17. Comment. In s. NR 243.25 (2), what enforcement is allowed in a case in which cost sharing is required but not available? This should be stated, for clarity and completeness.

Response: No change made. This is existing code language and the Department is not proposing changes to sections that are related to livestock performance standards and prohibitions. Also, this is already clarified in s. 281.16, Stats.-if cost-sharing is required but not available, the Department cannot require compliance.

18. Comment: Is a point source discharge by a small CAFO prohibited unless the discharge is covered by, and in compliance with, a WPDES permit?

Response: No change made. A small AFO may discharge without a permit until designated as a CAFO by the Department.

19. Comment: Section 2 (1) of the rule-making order should begin: "Except as provided in subs. (2) to (4),".

Response: No change made. Sub. (1) only applies to large CAFOs and sub. (4) is a reference to medium and small CAFOs.

II. US EPA Comments

1. Comment: US EPA made a number of technical and clarifying comments to the code.

Response: Some changes made. Where warranted, US EPA recommendations were included in the proposed rule.

2. Comment: The definition of saturated soil in proposed s. NR 243.03(52) *Wis. Adm. Code* may be difficult to apply in practice. Wisconsin should define the term in a practical manner. Please see the attached tables from the United States Department of Agriculture (USDA), Soil Conservation Service, (1972) and the USDA, Ohio Natural Resources Conservation Service (NRCS), (2003) for examples showing how to define or apply the term in a practical manner.

Response: No change made. The Department believes that the definition for saturated ground is appropriate and that the recommended language in the comment would more appropriately be contained in guidance on how to determine whether or not soil is saturated.

3. Comment: Wisconsin has properly defined the term "new source concentrated animal feeding operation" in proposed s. NR 243.115(2) *Wis. Adm. Code*. However, the notes following sub. (1) and sub. (2) are confusing given the way in which the term is defined. Wisconsin should revise the notes to

eliminate the possibility for confusion, particularly as it relates to animal feeding operations (AFOs) that are newly-constructed after April 14, 2003, and later add animals to become Large concentrated animal feeding operations (CAFOs).

Response: Change made.

5. Comment: Proposed s. NR 243.12(2)(a) 3. and 4. *Wis. Adm. Code* allow certain plans and specifications to be submitted during the term of the permit. To ensure that there is no misunderstanding about the time for compliance with production area effluent limitations and adequate storage requirements, the allowances in proposed par. 3. and 4. should be revised so they are conditioned by the requirements in SECTION 2. INITIAL APPLICABILITY of the proposed code package.

Response: Partial change. A note has been added to the code clarifying that compliance with production area requirements is not extended by Department approval to submit plans and specification and evaluations during the term of the permit.

6. Comment: Wisconsin needs to revise proposed s. NR 243.13(2)(a) 1. and 2. *Wis. Adm. Code* to strike the references to "facility" and "facilities" at least as the words would apply to Wisconsin Large CAFOs that are subject to 40 CFR part 412, subparts C and D. This required change will establish that the exception to the discharge prohibition applies only when, among other conditions, the discharge consists of an overflow from a *structure* (e.g., a tank, pond or lagoon, or pit) that is designed, constructed, operated, and maintained to contain all manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event.

Response: Change made. In addition, a note was added to the code indicating that production area discharges are only allowed from structures and that wastewater treatment strips, buffers and grassed water ways do not constitute structures.

7. Comment: On February 28, 2005, the United States Court of Appeals for the Second Circuit vacated provisions of the federal regulations which allow permit authorities to: (a) issue permits to CAFOs without including the terms of nutrient management plans in permits, (b) without reviewing plans, and (c) with plans remaining at the CAFO and thus unavailable to the public. *Waterkeeper Alliance, et al., v. USEPA*, 2005 WL 453139 (2nd Cir.). USEPA, Region 5, evaluated proposed s. NR 243.14(1) *Wis. Adm. Code* in the context of the *Waterkeeper* decision. This subsection provides, in part, that CAFOs shall submit their nutrient management plans to the Wisconsin Department of Natural Resources (WDNR) for review and approval. We find that the subsection conforms to *Waterkeeper* decision items (b) and (c), as summarized above, and will not prevent Wisconsin from administering its program in conformance with decision item (a).

Response: Thank you for the comment.

8. Comment: Proposed s. NR 243.14 *Wis. Adm. Code* needs to be revised to incorporate the requirements of 40 CFR § 122.42(e)(1)(iii), (vi), and (vii). To address 40 CFR § 122.42(e)(1)(vi), Wisconsin should require CAFOs to employ conservation practices that reduce erosion from land application areas at least to the tolerable rate (T).

Response: Partial change made. The Department has added language to ss. NR 243.13 and NR 243.19 to address clean water diversions and protocols for testing manure, soil and process wastewater. NRCS Standard 590, which is incorporated by reference into NR 243, addresses soil sampling (V.A.1.c.) and prohibits the application of manure on fields that exceed "T" (V.A.2.a.(6)).

9. Comment: Proposed s. NR 243.14 *Wis. Adm. Code* needs to be revised to require Large CAFOs to: (a) annually analyze manure and process wastewater for nitrogen and phosphorus content and (b) use the

results of manure, process wastewater, and soil analyses to determine application rates for manure and process wastewater. 40 CFR § 412.4(c)(3).

Response: Partial change made. Requirements to analyze manure are contained in s. NR 243.19(1)(c). This requirement has been modified so that manure shall be analyzed on an annual basis for nutrients, at a minimum, or more frequently if specified in a WPDES permit, unless applications in a given year do not occur. The Department has created s. NR 243.14(2)(f) to reflect comment (b).

10. Comment: Where manure or process wastewater will be surface applied and subsurface drains are not present within the land application area, Wisconsin protocols should require soil samples to be collected from a shallow depth (i.e., from one to two inches). This recommendation is consistent with Sharpley, *et al.*, (2003) who stated that, "[i]t is generally recommended that soil samples be collected to plow depth, usually 6 to 8 inches for routine evaluation of soil fertility. However, it is the surface inch or two in direct contact with runoff that is important when using soil testing to estimate P loss. Consequently, different sampling procedures may be necessary when using a soil test to estimate the potential for P loss."

Response: No change made. The Department supports the method used to obtain samples for soil tests outlined in NRCS Standard 590 in order to promote consistency with regard to the Soil Test Phosphorus method for addressing phosphorus delivery. For operations using the Wisconsin Phosphorus Index (P-Index), the P-Index calculations estimating runoff and eroded sediment phosphorus concentrations, account for soil stratification and adjusts plow layer soil test P values to surface soil P values.

11. Comment: Proposed s. NR 243.14(2)(c) *Wis. Adm. Code* provides, in part, that process wastewater may be applied to frozen ground in accordance with the requirements of s. NR 214.17(2) to (6) *Wis. Adm. Code*. s. NR 214.17(4)(d) *Wis. Adm. Code.* Under frozen ground conditions, the maximum daily volume in s. NR 214.17(4)(d) 5. *Wis. Adm. Code* is not reasonably likely to prevent runoff of process wastewater. This conclusion is based on a comparison of the 6,800 gallons per acre (gal/ac) volume with EPA with EPA calculations of the hydraulic rate necessary to avoid runoff.

Response: Partial change made. The Department has a long-standing history of regulation of industrial wastewaters under NR 214 that are more similar to CAFO process wastewaters than manure and believe that the winter restrictions contained in NR 214 are appropriate for CAFO process wastewater. In response to USEPA concerns, in addition to the restrictions in NR 214, the Department has included the following additional requirements for operations surface applying process wastewater under frozen or snow-covered conditions:

- All surface applications of process wastewater on frozen or snow-covered ground must result in a Winter Acute Loss Index value of 4 or less (using the Wisconsin Phosphorus Index) (see NR 243.14(8)).
- Permittees shall inspect surface applications on frozen or snow-covered ground during and shortly after application to document whether or not runoff has occurred (see NR 243.19(1)(a)6.)

12. Comment: Proposed s. NR 243.14(2)(c) *Wis. Adm. Code* provides, in part, that process wastewater may be applied to snow-covered ground in accordance with the requirements of s. NR 214.17(2) to (6) *Wis. Adm. Code.* USEPA, Region 5, reserves comments on this provision.

Response: Partial change made. The Department believes that the approach outlined in the response to comment #11 of this section will address future concerns of USEPA regarding applications of process wastewater on snow-covered ground.

13. Comment: Proposed s. NR 243.14(2)(d) *Wis. Adm. Code* requires a permittee to consider several factors when making decisions about the times at which manure and process wastewater may be applied on land (the probability, intensity, and form of predicted upcoming precipitation are among the factors).

This will not ensure compliance with proposed s. NR 243.14(2)(b) 1. *Wis. Adm. Code*. Wisconsin needs to revise proposed sub. (2)(d) to prohibit surface application of manure or process wastewater on land that is upslope from waters of the United States and conduits to such waters when the National Weather Service predicts a high probability (e.g., 50 percent or greater chance) of rain, in an amount likely to cause runoff, for the period extending 24 hours after the conclusion of an intended land application event. Revising the proposed code in this manner should prevent fish kills that can result when significant rain falls soon after manure or process wastewater has been surface applied.

Response: Change made. The Department has deleted s. NR 243.14(d)1. and has created s. NR 243.14(b)10. to read:

"Manure or process wastewater may not be surface applied when the National Weather Service predicts, within 24 hours of the end of the application, a 70% chance or greater of 0.5 inches of rain during non-frozen or non-snow-covered ground conditions or a 50% chance or greater of 0.25 inches of rain during frozen or snow-covered ground conditions."

The prior code language has been converted into a note.

14. Comment: Illinois, Indiana, Michigan, Minnesota, and Ohio have concluded that there is a high or very high risk of phosphorus movement to surface waters where the soil test phosphorus level (Bray P1) falls at levels ranging above 75 ppm to 150 ppm. These states either prohibit additional applications on these fields or multi-year phosphorus applications associated with manure and process wastewater on these fields. Wisconsin needs to explain why soil test phosphorus levels between 100 and 150 ppm do not produce a high risk of phosphorus movement to surface waters in Wisconsin. Alternatively, Wisconsin could (and should) revise proposed s. NR 243.14(5)(a) 2. *Wis. Adm. Code* to provide that applications of manure and process wastewater may not exceed the phosphorus removal of the following growing season's crop when the soil test phosphorus level is between 100 and 200 ppm.

Response: Partial change made. See response to comment #15 of this section.

15. Comment: Wisconsin needs to revise proposed s. NR 243.14(5)(a) 3. *Wis. Adm. Code* to provide that the application of manure and process wastewater is prohibited on fields with soil test phosphorus levels greater than 200 ppm. On these fields, phosphorus levels are so high that any application of manure, litter, or process wastewater would be inconsistent with appropriate agricultural utilization of nutrients and would lead to excessive levels of nutrients and other pollutants in runoff. As an alternative, a permittee may use a department approved method for assessing and minimizing the risk of phosphorus delivery to waters.

Response: Partial change made. The Department has modified the restrictions for operations that want to apply manure and process wastewater on fields with soil test phosphorus levels greater than 100 ppm to address the comment. Recognizing that fields with higher soil test phosphorus levels represent a potential higher risk of delivery than fields with lower phosphorus, the Department is proposing the following restrictions for fields with soil test phosphorus levels of 100 ppm or greater.

- Soil test levels between 100 and 200 ppm: Operations would be allowed to apply manure and process wastewater on these fields provided they run the Wisconsin Phosphorus Index (P-Index) and achieve an average P-Index of value of 6 or less for the field over a four year period or the rotation, whichever is less, and they limit the application to 50% of crop need over the rotation or four year period, whichever is less.
- 200 ppm or greater: Operations would be allowed to apply manure and process wastewater on these fields provided they run the Wisconsin Phosphorus Index (P-Index) and achieve a P-Index value of 6 or less for the field over a four year period or the rotation, whichever is less, they limit the application to 50% of crop need over the rotation or four year period, whichever is less, and are able to demonstrate that that phosphorus delivery will not significantly increase as a result of the application

of manure or process wastewater.

These requirements will allow applications on fields with higher soil test phosphorus levels when needed, will provide for the drawing down of soil test phosphorus levels over time, and ensure that the risk of phosphorus delivery to surface water is minimized.

16. Comment: USEPA, Region 5, has no objection to Wisconsin providing an alternative to the requirement to the soil test phosphorus method for assessing the risk of phosphorus delivery. However, as proposed, the language in s. NR 243.15(5) does not establish an alternative method for assessing the risk of phosphorus delivery and it does not establish a standard for the maximum rate at which manure and process wastewater phosphorus may be applied on land. Wisconsin needs to establish such a method and such rates if it wishes to provide an alternative to the soil test phosphorus method.

Response: Change made. Consistent with NRCS Standard 590, the Department has incorporated the Wisconsin Phosphorus Index (P-Index) into NR 243 as an additional method of assessing and minimizing phosphorus delivery. In addition to specific practices in NRCS Standard 590 (e.g., nutrient budgets, conservation planning) and NR 243 designed to address nutrient delivery to waters of the state, application rates for manure and process wastewater will be further restricted based on achieving a rotational P-Index of 6 or less. In doing so, permittees will be assessing and minimizing the risk of phosphorus delivery to waters.

17. Comment: Proposed s. NR 243.14(6) and (7) *Wis. Adm. Code* includes technical standards for surface application of manure in the winter. USEPA, Region 5, finds that the sub. (6) and (7) technical standards will minimize nutrient movement to waters where waters of the United States, sinkholes, open tile line intake structures, and other conduits to waters of the United States (hereinafter collectively "waters") are upslope from the land application area. In addition, we find that the standards will minimize nutrient movement to waters where nutrients need to be applied in the winter to grow a winter crop.

Response: Thank you for the comment.

18. Comment: Except as qualified by other comments, USEPA, Region 5, reserves comments on the proposed s. NR 243.14(6) and (7) *Wis. Adm. Code* standards as they pertain to surface application of the following materials in the winter: (a) beef cattle, heifer, calf, and turkey manure and (b) swine manure when the manure has been removed from storage following agitation.

Response: Partial change made. The Department believes that the approach outlined in the response to comment #22 of this section will address future concerns of USEPA regarding applications of these manures on snow-covered ground.

19. Comment: Proposed s. NR 243.14, table 5, *Wis. Adm. Code* provides maximum rates for emergency surface application of liquid manure on frozen ground. Under most scenarios involving surface application of liquid manure on soil that is frozen but not covered with snow, the rates in proposed s. NR 243.14, table 5, *Wis. Adm. Code* are not reasonably likely to ensure compliance with proposed s. NR 243.14(2)(b) 1. *Wis. Adm. Code*. Wisconsin needs to revise proposed s. NR 243.14(7) *Wis. Adm. Code* to provide that the hydraulic rate at which liquid manure may be applied on ground that is frozen but not covered with snow shall be limited to prevent runoff.

Response: See response to comment #22 of this section.

20. Comment: Proposed s. NR 243.14(6) *Wis. Adm. Code* includes technical standards for surface application of solid manure in the winter. USEPA, Region 5, evaluated the standards as they affect the movement of nutrients and manure pollutants in runoff from melted snow where waters are downslope from the land application area and a crop will not be grown in the winter or nutrients need not be applied

in that season to grow a winter crop. Based on the evaluation, we find that the technical standards in will not minimize movement of nutrients when layer and broiler manure Hydrologic Soil Group B, C, and D soils in the winter.

Response: See response to comment #22 of this section.

21. Comment: In emergencies, proposed s. NR 243.14(7)(d) provides that surface application can occur as long as the application is approved by the State and conforms to (a) the restrictions in proposed s. NR 243.14, table 5, *Wis. Adm. Code* or (b) State-approved restrictions other than those in table 5. Separately, proposed sub. (e) provides that the standards summarized in a. through c., above, do not apply to existing source CAFOs before 2010. Based on the evaluation, we find that the technical standards in table 5 will minimize nutrient movement to waters when (a) swine manure is removed from storage without agitation and surface applied on any snow-covered soil or (b) mature dairy cow manure is surface applied on snow-covered Hydrologic Soil Group A soils. Furthermore, we find that the technical standards in table 5 will not minimize movement of nutrients to waters when mature dairy cow manure is surface applied on Hydrologic Soil Group B, C, or D soils. As a result, Wisconsin needs to revise proposed s. NR 243.14(7) *Wis. Adm. Code* to (a) prohibit all surface applications of mature dairy cow manure on Hydrologic Soil Group B, C, and D soils in the winter or (b) include management practices that will minimize nutrient movement to waters when mature dairy cow manure is surface applied on Hydrologic Soil Group B, C, or D soils in the winter.

Response: See response to comment #22 of this section.

22. Comment: Proposed s. NR 243.14(7)(d) 3. *Wis. Adm. Code* provides that the State may approve sites and restrictions for emergency applications of liquid manure on frozen or snow-covered ground other than the restrictions in proposed s. NR 243.14, table 5, *Wis. Adm. Code*. USEPA, Region 5, finds that this provision does not conform to 40 CFR § 123.36 because it does not establish a technical standard for emergency applications of liquid manure on frozen or snow-covered ground. Wisconsin needs to strike this provision from the code

Response: Change made. Except for specific comments outlined below, the Department has included the following provisions, in addition to the restrictions already included in NRCS Standard 590 and ss. NR 243.14(6) and (7), to address EPA concerns regarding surface applications of manure on frozen or snow-covered soil, including emergency and frozen manure applications:

- All surface applications of process wastewater on frozen or snow-covered ground must result in a Winter Acute Loss Index value of 4 or less (using the Wisconsin Phosphorus Index) (see NR 243.14(7)(d)3. and (8)). These fields are viewed as being low risk for runoff during frozen or snow-covered ground conditions.
- Permittees shall inspect surface applications on frozen or snow-covered ground during and shortly after application to document whether or not runoff has occurred (see NR 243.19(1)(a)6.)

The Department believes that given the potential variability of phosphorus concentrations in manure and process wastewater beyond the levels identified in Midwest Plan Service documents, Table 5 appropriately contains the option of limiting applications based on a hydraulic application loading rate or on limits in a nutrient management plan. The Department has added clarification that P_2O_5 limits in the nutrient management plan must not exceed the P nutrient budget for the following year's crop, taking into account previous P applications.

23. Comment: Proposed s. NR 243.14(7)(e) *Wis. Adm. Code* provides that existing source CAFOs which do not have 180 days of manure storage capacity may surface apply liquid manure on frozen or snow-covered ground before January 1, 2010. USEPA, Region 5, recommends that Wisconsin should exclude AFOs that increase animal numbers to become Large CAFOs after the effective date of the recreated code. Wisconsin should require these CAFOs to comply with technical standards for surface

application of liquid manure upon permit issuance or by December 31, 2006, whichever is later. AFOs that increase animal numbers to become Large CAFOs typically engage in planning, design, and construction activities before they become Large CAFOs.

In addition USEPA, Region V, recommends that Wisconsin should require other existing source Large CAFOs to comply with the technical standards for liquid manure surface application in the winter as expeditiously as practicable but in no case later than three years after the effective date of the recreated code. To develop this recommendation, USEPA, Region 5, referred to the Clean Water Act, section 301(b)(2)(E) and (F), 33 United States Code (USC) § 1331(b)(2)(E) and (F), for guidance. In this section, Congress required compliance with effluent limitations guidelines for conventional and other pollutants as expeditiously as practicable but in no case later than three years after the effective date of the guidelines.

Our recommendation concerning the compliance deadline for other Large CAFOs balances the fact that federal regulations require implementation of nutrient management plans by December 31, 2006, with the fact that Wisconsin has discretion to establish technical standards that minimize nutrient movement to waters including discretion to establish reasonable schedules for compliance with the standards.

Response: The Department believes that adding reduced compliance schedules for a limited number of operations adds unnecessary complexity to the rule. CAFOs in Wisconsin have been developing and implementing nutrient management plans since the WDNR began issuing WPDES permits in the mid-1980's. CAFO nutrient management plans for most CAFOs will reflect the revisions (phosphorus-based requirements, SWQMA restrictions) to NR 243 prior to July 31, 2007. It is only the storage requirement and frozen or snow covered ground requirement for operations without 180-day storage that become effective Jan. 1, 2010 for liquid manure, for a limited number of operations, a date that will meet or is likely to meet the three year schedule recommended by US EPA.

In addition, the Department currently estimates that approximately 80% of permitted operations have 180-days of storage. The Department also believes that many future CAFOs will design to have 180-days of storage prior to or soon after permit issuance because of the planning efforts described in the comment above. In addition, operations that already have six months of storage for liquid manure will be required to maintain six months of storage for liquid manure. However, the Department continues to believe that for some operations, additional time is likely necessary to finance and construct storage. From a practical standpoint, allowing a limited number of producers to land apply on frozen or snow-covered ground prior to January 1, 2010, ensures these operations are able to operate financially while protecting the environment. Given that promulgation of NR 243 is likely to occur in mid to late 2006, the January 1, 2010, restriction will likely meet or be very close to meeting the three years compliance period recommended by US EPA. It should be noted that operations that are allowed to apply manure on frozen or snow-covered ground prior to January 1, 2010, will continue to be subject to restrictive application requirements.

24. Comment: The federal Effluent Limitations Guidelines and New Source Performance Standards prohibit the discharge of manure, litter, or process wastewater pollutants from production areas at Large CAFOs that are subject to 40 CFR part 412, subparts C and D. An exception arises when, subject to additional conditions, a discharge is caused by precipitation and consists of an overflow from a structure that is designed, constructed, operated, and maintained to contain all manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. Wisconsin should advise Large CAFOs that certain accepted management practices referenced in proposed s. NR 243.15(2) *Wis. Adm. Code*, including wastewater treatment strips and grassed waterways, are not structures and, thus, are not likely to ensure compliance with the revised standard in s. NR 243.13(2)(a) *Wis. Adm. Code*. (The recommended advisory also applies to feed storage facilities and associated runoff control systems, the design and construction of which may be approved by the State under proposed s. NR 243.15(9) *Wis. Adm. Code*.) Wisconsin should further advise Large CAFOs that approval of a runoff control system does not constitute a defense in an enforcement action for violation of permit effluent limitations applicable to production area discharges.

Response: Change made. The Department concurs that certain referenced practices such as grassed waterways and filter strips do not constitute a structure and thus, do not allow for a discharge to navigable waters under any circumstance, including storm events greater than the 25-year, 24-hour storm events for most operations. It is the duty of the permittee to properly manage its operation to ensure there are no discharges to navigable waters. A note has been added after ss. NR 243.141(3)(c) and NR 243.15(2) stating respectively:

> **Note:** Manure stacks are considered to be part of the animal production area and are subject to production area discharge restrictions in s. NR 243.13. For CAFOs, if a manure stack is not placed in a containment or storage structure or the runoff from the stack is not contained in a structure, discharges to navigable waters are not allowed under any circumstance or storm event.

> **Note:** In accordance with s. NR 243.13(2), operations are not allowed to discharge pollutants to navigable waters under any circumstance or storm event from parts of the production area where manure or process wastewater is not properly stored or contained by a structure. Wastewater treatment strips, grassed waterways or buffers are examples of facilities or systems that by themselves do not constitute a structure.

In addition, the WDNR has added the following advisory language to the code after s. NR 243.15(1)(a):

> **Note:** Department approval should not be viewed as a guarantee that the approved facility or system or permittee can or will comply with WPDES permit conditions.

25. Comment: Wisconsin needs to revise proposed s. NR 243.19(1)(a) *Wis. Adm. Code* to expressly require CAFOs to have a depth marker for their open surface liquid impoundments with such markers clearly indicating the capacity necessary to contain the runoff and direct precipitation from the 25-year, 24-hour rainfall event. 40 CFR § 412.37(a)(2).

Response: Partial change made. Section NR 243.15(3)(e) contains requirements that all proposed liquid storage or containment structures have permanent markers indicating the maximum operating level which indicates the level necessary to contain precipitation and runoff from the appropriate storm event for a given animal type. In addition, s. NR 243.16(4) has been modified to clearly indicate that previously constructed structure have markers in place by January 1, 2010.

26. Comment: Wisconsin needs to revise proposed s. NR 243.19(2)(b) *Wis. Adm. Code* to require CAFOs to generate and keep records: (a) on expected crop yields, (b) explaining the basis for determining manure and process wastewater application rates, and (c) showing calculations on the total nitrogen and phosphorus to be applied to each field, including sources other than manure and process wastewater. 40 CFR § 412.37(c)

Response: No change made. Section NR 243.14 requires permittees to develop a nutrient management plan in accordance with NRCS Standard 590 (which is incorporated by reference into NR 243) that takes into account expected yield goals (590, Part V.A.1.b.), manure application rates based on nutrient budgets (590, Parts II and V.A.1.a.) and other restrictions (590, Parts V.A., B., and C and s. NR 243.14(1)-(10)). The nutrient management plan is considered a term of the permit. In addition, permittees must submit an annual report in accordance with s. NR 243.19(3)(c)5. The annual report is also a record. In accordance with s. NR 243.19(2), the permittee shall retain these records for at least 5 years.

27. Comment: A discharge that consists entirely of manure appears not to be contemplated within the definition of "contaminated runoff." As a result, proposed s. NR 243.26(4)(a) 2. *Wis. Adm. Code* needs to be revised as follows: "Addresses discharges of manure and contaminated runoff from the production area in a manner that is consistent with accepted management practices and that treats or contains all manure and contaminated runoff ..."

Response: Change made.

28. Comment: Proposed s. NR 243.26(4)(a) 2. *Wis. Adm. Code* provides that permits issued to Medium and Small CAFOs shall address contaminated runoff from the production area in a manner that is consistent with accepted management practices and treats or contains all contaminated runoff for storm events up to and including the 25-year, 24-hour storm event. USEPA believes that, in many cases, Wisconsin will find it appropriate to develop effluent limitations for production area discharges from Medium and Small CAFOs which are based on containment technology. Wisconsin has discretion to establish effluent limitations based on a technology other than containment in accordance with USEPA (2003), section 4.1.1. In any event, Wisconsin needs to revise proposed s. NR 243.26(4)(a) 2. *Wis. Adm. Code* to explicitly provide that the State will consider the factors in 40 CFR § 125.3(d) when it establishes technology-based effluent limitations applicable to production area discharges from Medium and Small CAFOs.

Response: Change made. In response to the comment, the Department has included a note that the Department will consider the factors contained in 40 CFR § 125.3(d) when determining accepted management practices for small and medium CAFOs.

III. Other Agency Comments

NRCS

1. Comment: Wisconsin NRCS submitted a number of comments related to definitions and use of NRCS Technical Standards in NR 243.

Response: Some changes made. The Department modified the definition of "wastewater treatment" strip, Table 3, and removed sections of s. NR 243.15(3) already included in the code under NRCS Standard 313, in response to the comments.

DATCP

2. Comment: DATCP commented that one of the rationales for creation of the Livestock Siting Rule (ATCP 51) is to reduce the regulatory burden on farmers to site and expand livestock facilities. DATCP hopes that the increased review time required under revised NR 243 for nutrient management plans and manure storage facilities does not result in unnecessary delays in issuing permits to the livestock industry.

Response: No change made. The Department recognizes concerns associated with additional reviews and time to complete such reviews and has attempted to minimize these impacts as much as possible. In some areas, the rule revisions will decrease the time of reviews by promoting consistency from operation to operation. In other areas, particularly where mandated by US EPA or as needed to ensure permit compliance and protect water quality, additional reviews associated with the rule revision are necessary. The Department remains committed to ensuring timely review of all permit applications and approvals.

3. Comment: In areas where DATCP does not have specific comments, we generally support rule requirements and believe they provide the necessary flexibility for agriculture to grow in Wisconsin while protecting water quality and public health, safety and welfare. DATCP recognizes and supports the Department's mission of protecting Wisconsin's environment and health and safety of Wisconsin residents and visitors and hopes to remain a valued partner in ensuring a sustainable future for agriculture and a high-quality natural environment.

Response: No change made. Thank you for the comment.

4. Comment: DATCP would like to see clarification, including in the rule, on how NR 243 affects contract growers.

Response: No change made. Given the number of potential scenarios associated with contract growers, the Department believes that current language in NR 243 provides the necessary flexibility to properly address potential permit issues associated with contract growers and does not believe further clarification is needed.

5. Comment: The ATCP Board passed a resolution urging the DNR to coordinate its final "animal unit" (AU) rule proposal with DATCP, the Legislature, the livestock industry and other interested parties, so that the rulemaking does not have unintended consequences affecting DATCP administration of the Livestock Facility Siting Law or rules. DATCP commented that the Department should calculate AUs based on more precise methods than proposed by EPA. Owners of smaller dairy breeds should be allowed to use actual live animal weights to determine AU equivalency and not be forced to use a table designed for larger dairy breeds. In addition, DATCP strongly recommended a narrowly crafted mixed AU exemption in order to better reflect the actual weight and manure production of the broilers. Such an exemption would recognize the investments made by farms under current rule requirements, thus continuing to grow Wisconsin's agriculture, while continuing to protect its water resources.

DATCP also commented that it is inequitable that proposed revisions to NR 243 would require permits for operations now under the 1000 AU threshold to obtain a permit.

Response: Some changes made. The Department has proposed modifications to the method of calculating AUs (see response to comment #46, section V). The proposed approach would primarily sustain the status quo under NR 243 as it exists now. A few operations will be required to obtain permits based strictly on federal rule changes that impact how NR 243 calculates animal units for individual animal types. The Department believes it is important to maintain current NR 243 animal units for the mixed AU calculation in order to avoid a rollback of current code requirements. The Department has been in contact with DATCP and presented the new approach during hearings on proposed legislation that would impact how the Department calculates animal units.

6. Comment: DATCP commented on a number of conditions it believed were confusing and that would result in inconsistent application from one permit writer to the next (SWQMA restrictions, winter spreading restrictions, restrictions based on separation to groundwater or bedrock). It commented that more consistent implementation could occur if the 590 standard was followed. DATCP recommended a number of possible changes to simplify the rule and promote consistency with the 590 standard.

Response: No change made. The revisions to NR 243 are intended to promote consistency from permit to permit and to provide water quality protection. The 590 Standard primarily promotes nutrient management and has some limitations when addressing water quality impacts from CAFOs on a case-by-case basis. Also see the response to comment #12, section V, regarding consistency with the 590 standard.

7. Comment: DATCP recommends requiring incorporation with 72 hours rather than 48 hours in order to promote consistency with the 590 Standard and to avoid damage to the soil structure.

Response: No change made. One of the Department's concerns of allowing up to 72 hours for incorporation in certain areas is the potential for rain events to cause manure runoff as a result of the manure saturating or nearly saturating the soil. Incorporation within 48 hours will reduce this potential source of runoff and allow producers to use their judgment to determine application rates that are needed to avoid damages to soil structure.

8. Comment: DATCP commends NR 243 Green Tier provisions and provisions that allow use of innovative technologies. We believe these provisions will encourage livestock operator innovation and enhance resource protection.

Response: Change made. The Green Tier code language has been removed and a note has been added instead. This was done in order to avoid confusion on how the Department implements the Green Tier program and in response to Legislative Rules Clearinghouse Comments. The Department remains committed to the Green Tier program for CAFOs. However, code language is not required to implement the Green Tier program. Standard language regarding variances remains in the code.

9. Comment: To be equal or more restrictive than 590 and livestock siting, NR 243 should specifically require that fields where manure and process wastewater are applied meet "T" and require a conservation plan to be developed for additional winter restrictions not listed in the 590 Standard (phosphorus restrictions, applications near wells and karst features)

Response: No change made. NR 243 is equally or more restrictive than the 590 Standard and the Livestock Siting Rule as it relates to water quality impacts. NR 243 incorporates the 590 Standard by reference. The requirements in the 590 Standard apply to CAFO nutrient management plans unless specifically superseded by NR 243 requirements.

10. Comment: NR 243 requires visual inspection of various farm operations and at various frequencies. While DATCP believes that most operators will conduct such inspections as a routine part of their facility management, we recognize that some specific inspection requirements need to be part of this rule and support these provisions.

Response: Thank you for the comment.

11. Comment: DATCP agrees with the need for an emergency response plan. Such plans may help resolve manure management incidences in a more timely manner and therefore with less impact on the water resources. However, the requirement should be stronger and consistent with proposed ATCP 51, which requires procedures to respond to odor complaints and includes an employee training component.

Response: While the Department supports these concepts, it does not have authority to require them under NR 243 emergency response plans.

IV. Small Business Regulatory Review Board Comments

1. Comment: The SBRRB finds that the agency adequately describes the small business entities that will be affected by the rule. The DNR implies that the majority of businesses affected by the proposed rule meet the definition of small business as contained in Wis. Stats. 227.114(1).

Response: The DNR is assuming that all affected livestock operations are small businesses and the calculations and impacts have been assessed accordingly.

2. Comment: The SBRRB finds that the agency did not, to the extent possible, describe the diversity in the size of regulated entities, revenues in each size grouping or the profitability in each size group. A significant discrepancy exists in the amount of economic impact reported between the compliance costs estimated by the Wisconsin Dairy Business Association and those estimated by the DNR. The Board notes that the IRFA contains cost information about the operators currently regulated, however, the analysis is extremely limited in analyzing the costs to new operators required to comply if the rule is adopted as proposed.

Response: The types of livestock operations impacted by this rule are 85% dairy, 8% poultry and 7% swine or beef. Operations can be made up of any combinations of poultry, dairy and swine or beef.

Under dairy, an operation can include heifer only operations rather than the milking/dry cows, heifers and calves that typically make up a dairy operation. The typical dairy would include a herd size of 920 animals (from all groups) before it would be considered a large CAFO (over 1,000 animal units). Under the current NR 243, a poultry operation would house 200,000 broilers before it would be considered a large CAFO and require a permit. Under the revised rule, the number will drop to 125,000 broilers, based on federal requirements.

DNR has attempted to gather financial information about livestock operations from financial specialists, university authorities, dairy associations and agricultural departments. This information is considered proprietary and without financial or tax records of individual farms, information on revenues and profitability in each size group is not available. As one financial adviser indicated, profitability is related to the overhead an operation is carrying and cannot be directly correlated to herd size.

SBRRB has indicated a concern that the economic impact, as projected by the Wisconsin Dairy Business Association (DBA), is greater than the economic projection from DNR. Since the cost estimates by DBA was not shared with DNR, it is difficult to compare those figures with ours. Assumptions were made on both sides in order to arrive at a cost projection. However, a large part of the contention was based on the number of livestock operations that may need to receive permit coverage. DNR's number was 85 and DBA's was 250. In response to public comments, the DNR has modified the animal unit calculation and as a result fewer operations will be affected. The new figure is that 15 operations will immediately come under the rule. The revised animal unit calculations have been shared with DBA.

3. Comment: The SBRRB finds that DNR may need to do further analysis to determine whether or not the IRFA contains a fair first-estimate of expected economic impacts on the affected entities.

Response: The DNR has updated the fiscal impact report with the new number of affected operations. The report identifies the sources of the information provided. Any comments received during the public notice period that included cost projections for certain activities were checked for consistency. Our projected numbers for nutrient management and manure storage are consistent with numbers submitted by the public.

4. Comment: The SBRRB finds that identification as to whether or not the first-estimate costs are significant or insignificant is difficult to determine because the IRFA does not contain a fair first estimate of the expected economic impact on the affected entities. If the proposed mixed-use animal unit calculation is adopted, the Wisconsin Dairy Business Association estimates an economic impact to approximately 250 operators. The DNR cites a much lower number of operators.

Response: As indicated in the response to comment #2 of this section, the DNR has modified the mixed-use animal unit calculation and has shared this information with DBA. The conclusion is that the economic impact will not be significant because less than 1% of all livestock operations in the state will come under permit coverage.

5. Comment: The SBRRB is unclear on whether correct criteria were used in determining whether a substantial number of small businesses would be affected by the rule.

Response: See the response to comment #2 and #4 of this section.

6. Comment: The SBRRB has questions on the process used to acquire quantitative or other information to support the agency's initial regulatory flexibility analysis to determine the fiscal impact on small businesses. The Wisconsin Dairy Business Association believes that if this rule is adopted as proposed, producers will need to reduce animals in order to comply with the new requirements, adversely affecting the Wisconsin economy.

Response: The revised fiscal impact report identifies all sources of information used in the fiscal assessment. DBA has not provided their numbers or sources to DNR for comparison. In the absence of documentation that indicates DNR sources are incorrect, the DNR will continue to use the values identified in the report.

The rule has been revised from the version reviewed by the SBRRB. The new revisions have resulted in maintaining the status quo for operations that were identified as needing permit coverage under the current NR 243 and adding to that list only those operations that are mandated by the federal government. It is clear that some operations will now be considered a large CAFO by federal standards that were not classified as CAFOs by the state under current NR 243. If an individual operation chooses to reduce their number of animal units rather than apply for a permit, they have that option. Notably, animal reduction has been available to producers since NR 243 was initially promulgated in 1980.

7. Comment: The rule will result in increased costs to affected businesses and includes increased reporting requirements.

Response: DNR is making efforts to provide standard forms to affected businesses and to provide flexibility with compliance dates to minimize the increased costs.

8. Comment: The rule may provide benefits to small businesses that are yet to be determined based on unknown factors at the time. For example, benefits may exist if flexible dates are written into the rule that would allow for changing weather and field conditions.

Response: The DNR has provided flexibility throughout the proposed rule to accommodate producers and producer groups concerns including; allowing stacking of solid manure rather than constructing more costly manure storage facilities for certain types of solid manure; allowing lower levels of manure storage than the required 180 days to allow for incremental expansion; extending the deadline to November 30th for first time permittees for construction of manure storage facilities; allowing stacking for eight months from the time of stacking rather than removing all stacks by June 30th; allowing permittees 90 days to apply for permits for newly acquired property; and providing several options for practices near surface waters (the SWQMA) that are potentially equivalent to the federal 100-foot setback requirement.

9. Comment: The rule may provide benefits to the public; however, SBRRB recommends that DNR carefully consider the imposition of significant burdens on small business with limited environmental benefits.

Response: The DNR has minimized the costs where possible. Where DNR does not have discretion, due to federal requirements, the costs could not be modified. The benefit to the public and the environment comes from careful handling and disposal of manure and the tracking of an operation's activities to ensure compliance. Members of the public are concerned when wells are contaminated, fisheries are destroyed and water quality is compromised.

10. Comment: The SBRRB find it difficult to determine whether or not the benefits to the public outweigh the costs to the business. The SBRRB is concerned that the proposed rule may over-regulate the industry. This rule appears to go beyond the federal mandate, putting a heavier regulatory burden on small business. The SBRRB recommends that the DNR consider other alternatives that would be less burdensome to those small businesses affected by this proposed rule as mentioned below.

Response: The DNR has modified the mixed animal unit calculation and returned to the current NR 243 method of calculation. This has significantly reduced the number of operations potentially affected by the rule. The rule has been revised to include federal requirements which will bring an additional 15 operations into the program.

11. Comment: The Board requests that DNR provide the Board with any comments received at the public hearings specifically addressing any of the methods outlined below to which the DNR could consider in reducing the small business impact of this rule.
Comments related to:

1. The establishment of less stringent compliance or reporting requirements:
2. The establishment of less stringent schedules or deadlines for compliance of reporting requirements for small businesses;
3. The consolidation or simplification of compliance or reporting requirements for small business;
4. The establishment of performance standards for small businesses to replace design or operational standards required in the rule;
5. The allowance of a phasing-in period of compliance or tiered compliance approach for small businesses that are impacted by the rule.
6. Any options the DNR identifies for reducing the rule's regulatory impact on small entities may require further analysis and/or data collection to ensure that the options are practicable, enforceable, protective of public health, environmentally sound and are consistent with the requirements of the Regulatory Flexibility Act.

Response: The DNR completed a Small Business/Final Regulatory Flexibility Analysis to address the changes made in response to the public hearing comments. As part of that analysis, a separate "Fiscal Impact Report – Private Sector" has been prepared. The comments submitted by small businesses and the DNR response to those comments will be provided under separate cover.

V. Public Comments

A total of five hearings were held on ch. NR 243 at the following locations in late summer of 2005; Richland Center (August 15), Jefferson (August 17), Eau Claire (August 18), Wausau (August 22) and Green Bay (August 25). Public participation at the hearings is summarized in the table below.

Comments at the hearings generally reflected the written comments received during the public comment period which are discussed thought the **"Response to Comments"** document.

Hearing Location	Total attendance	Appearance slips	Oral Testimony	Support	Support w. Changes	Oppose	As Interest May Appear
Richland Center	30	24	8	2	0	3	4
Jefferson	20	19	7	2	1	5	1
Eau Claire	14	12	6	4	1	3	2
Wausau	34	29	6	3	0	12	12
Green Bay	75	33	15	16	1	3	2
Totals	173	117	42	27	3	26	21

Based on input from producers and producer groups, the Department extended the public comment from September 9, 2005 to October 14, 2005. In addition to the comments received at hearings, the Department received 374 comment letters with a total of approximately 1200 individual comments regarding the rule.

A large number of comments were received that generally supported the rule revisions, although some preferred that the rules were more restrictive, and believed that the revisions were necessary to protect water quality. General support for some or all of NR 243 came from a number of environmental advocacy and conservation groups (e.g., Midwest Environmental Advocates representing over 15 advocacy groups and individuals, River Alliance of Wisconsin, Centerville CARES, Environmental

Defense, The Wisconsin Wildlife Federation, Wisconsin Trout Unlimited) and individual citizens. General reasons for support included a desire to protect groundwater, fish and aquatic life, recreational opportunities, land values and human health, and concerns about the presence of manure in surface water and groundwater. Many comments expressed pride in Wisconsin's farming heritage and generally supported agriculture in the state of Wisconsin. Approximately 260 comments voiced concerns about impacts to water quality from improper manure handling, general support for rule requirements for winter spreading restrictions and liquid manure storage, and concern about general permits and allowances to stack manure outside of confined storage facilities. The Department also received a submittal from 25 members of the Wisconsin League of Conservation Voters expressing general support for the rule based on concerns about protecting Wisconsin's water resources.

The Department received many comments from individual producers, permitted and unpermitted, producer groups (e.g., Dairy Business Association, Midwest Food Processors Association, Wisconsin Federation of Cooperatives, Wisconsin Pork Association) and agronomists who work with livestock operations. These commenters generally spoke in opposition to the proposed rule conditions, particularly as related to duty to apply requirements, the continued use of the combined animal unit calculation, liquid storage requirements, restrictions on frozen or snow-covered ground, responsibility for manure distributed to other producers or individuals, and monitoring and inspection requirements.

Many producers and producer groups believed that the rule requirements are too costly and are overly prescriptive and onerous and would impede growth of the livestock sector in Wisconsin. Many believed that the revisions exceed the federal regulations and are not consistent with other state of Wisconsin rules and standards (e.g., Livestock Siting Rules-ATCP 51, ATCP 50 and NRCS Standard 590), particularly related to nutrient management requirements.

Some changes have been made in response to public comment. Responses to specific comments are contained throughout the **"Response to Comment"** document.

General

1. Comment: A number of comments were made requesting cost-sharing or in support of cost-share programs for producers.

Response: No change made. The Department has pushed for cost-sharing for implementation of agricultural best management practices. However, compliance with the requirements of NR 243 is not contingent on cost-sharing. The Department recognizes there will be costs associated with the proposed revisions to NR 243. The Department has attempted to minimize those costs while ensuring water quality protection.

2. Comment: A producer group representative submitted a redline/strikeout version of the proposed rule with recommended changes to NR 243.

Response: Some changes made. The Department made changes where the recommended revisions improved or provided clarification to the code.

3. Comment: Comments were received regarding concerns about how NR 243 interacts with local (town, county) requirements.

Response: No change made. Local requirements may be tied to NR 243 with respect to water quality by the Livestock Siting Rule (ATCP 51). Where possible, the Department has attempted to ensure that water quality-related restrictions are consistent with the Livestock Siting Rule. NR 243 permit requirements for water quality are expected to be equally, if not more, restrictive than ATCP 51. However, there may be non-water quality related requirements where ATCP 51 is more stringent than NR 243 (odor, employee training).

4. Comment: A number of comments requested that the Department do more to promote efforts such as composting, new technologies (separators, aeration, digesters, incinerators), and grazing.

Response: No change made. While producers may use any number of best management practices to comply with NR 243, those practices, including new technologies, are not dictated by NR 243. The rule could potentially provides incentives for new technologies under allowances for alternative discharge limitations (s. NR 243.13) as well as incentives under the Department's Green Tier program which encourages superior environmental performance.

5. Comment: There are some requirements in the permit that we do not agree on but we learn that it is for our own benefit. It is very important that we as producers and you as the department work together to keep agriculture a viable part of this state's economy and that the environment is taken care of.

Response: No change made. Thank you for your comment. The Department is committed to protection of water quality for all the citizens of Wisconsin and to keep agriculture a thriving business in Wisconsin. The Department has made it a priority to work with its regulated constituents in their efforts to seek viable solutions to protect water resources and will endeavor to do so in the future.

6. Comment: From what we understand, we would much rather keep the current relationship with the department than dealing direct with the EPA at a federal level.

Response: No change made. Thank you for the comment. In large part the proposed changes to the NR 243 are an important part of retaining the Department's delegation to implement the NPDES permit program in Wisconsin.

7. Comment: Many producer/producer group comments described the rule as overly prescriptive and preferred that operations were treated individually to account for the differences between operations and climate in the state rather than with a set of blanket rules. Some comments recommended that requirements should be based on a set of general performance or goals rather than prescriptive requirements to allow for flexibility. An example would be a prohibition of discharge to streams, lakes, etc. Producers would then need to take whatever steps are necessary in their specific situation to adhere to this regulation.

Response: Some changes made. There remains a great deal of flexibility for producers within many of the restrictions in NR 243. For example, the Department has attempted to provide more flexibility for producers that wish to practice no-till farming by reducing reliance on injection and incorporation to avoid acute runoff issues (see SWQMA restrictions – s. NR 243.14(4)). In addition, the Department has modified phosphorus requirements in response to comments to allow permittees flexibility in implementing different methods of minimizing phosphorus delivery to surface waters from fields (s. NR 243.14(5)). However, while the Department recognizes the issue of flexibility, the Department also recognizes the concerns of producers and the public for consistent implementation of regulations, which is difficult with general performance goals. One of the goals of the revisions to NR 243, and one of the requirements of the federal rule revisions, was to more clearly outline expected best management practices to better protect water quality, avoid inconsistent implementation of NR 243 and create a more level regulatory playing field.

8. Comment: A number of commenters recognized the issues associated with CAFOs and runoff but were not sure if the code addressed the problems correctly.

Response: No change made. In many respects, the revisions to NR 243 set a minimum level of expectation in terms of best management practice implementation. Many of the requirements in NR 243 are based on what many producers are already doing (up to 80% of operations already have 180-day liquid manure storage, many operations already avoid surface applications of liquid manure on frozen or

snow-covered ground). It is expected that some producers may need to exceed the proposed best management practices (e.g., some operations may need more than 180-days of storage). In many areas, the code provides flexibility the code in implementing new or alternative practices.

9. Comment: Some comments expressed concern about how the proposed rule will impact operations as it relates to other rules such as odors and air emissions or county or town requirements. A comment stated that one agency must not put an operation into violation of an other agency's rules.

Response: No change made. Based on the Department's understanding of the Livestock Siting Rule, it is expected that many operations will be able to address air and odor issues using best management practices. However, there may be future EPA and state air or odor regulations that could impact permitted operations. To the maximum extent possible, the Department has tried to create a rule in NR 243 that is based on what many producers are already doing to address manure management issues at there operations. In addition, it is expected the implementation of new technologies (solids separation, digestion) may help to address some of these issues.

10. Comment: The Department received a number of positive comments from producers, producer groups, public citizens and environmental advocacy and conservation groups for its efforts during the NR 243 rule revision process. Comments were received thanking the Department for efforts to educate producers about the code revisions and for the extension of the comment period on the rule to October 14, 2005. Many groups indicated a desire and need to work together with the Department on water quality issues and revisions to NR 243.

Response: No change made. The Department appreciates the recognition of its efforts on NR 243 and hopes to continue its partnership with all stakeholder groups.

11. Comment: Some producer groups commented that USEPA is in the process of revising its CAFO rules to conform to the holdings in the *Waterkeeper* case. USEPA expects to publish the proposed new rule in November or December 2005 and, following a comment period, finalize the rule in the summer of 2006. WDNR should hold NR 243 and conform it to the revised federal rule to be developed as a result of this process.

Response: No change made. The Department believes it is necessary to move forward with revisions to NR 243. Much of the federal CAFO rule revision was upheld by the *Waterkeeper* case (e.g., phosphorus based nutrient management planning, restrictions on the timing of manure applications, requirements for adequate storage). The Department has drafted revisions to NR 243 taking into account the *Waterkeeper* decision in order reduce or eliminate the impacts of future federal CAFO rule revisions. Any decision on the need to further revise NR 243 would be made at the time of the finalization of any changes at the federal level.

12. Comment: A number of producers and producer groups commented that revisions to NR 243 should be consistent with other federal and state rules and standards, particularly, Livestock Siting Rules (ATCP 51) nutrient management requirements (ATCP 50 and NRCS Standard 590), perhaps even waiting until Livestock Siting Rules were in place. They encouraged the Department to work with DATCP to avoid conflicts among NR 243, NRCS 590, ATCP 50 and ATCP 51. This concern was also expressed in comments from State Representatives Al Ott and Scott Gunderson. For example, a number of producers groups and producer object to the proposed rule's nutrient management provisions that go beyond those practices in the updated version of 590. One producer group commented that the Department should trust in the Standards Oversight Council (SOC) process and not supplant its judgment for the expertise of SOC in the context of technical standard development. Another producer group recommended that the Department should reference ATCP 50's nutrient management requirements.

Producers/producer groups commented that if there is inconsistency among different programs, there is increased complexity and confusion and an associated risk of inadvertent permit violations. Many

contend that consistency will increase compliance. In addition, failure to be consistent with federal rules will put Wisconsin producers at an economic disadvantage

Response: Partial change made. The Department has worked with its partners at the state and federal level to ensure consistency between the various state and federal regulatory and voluntary programs that impact agriculture to the maximum extent possible where those programs address the unique water quality impacts associated with large CAFOs. For example, many of the key agronomic elements of NRCS Standard 590 have been incorporated into NR 243 (e.g., crop nutrient need, soil sampling) and application restrictions are the same. However, NRCS Standards serve primarily as the basis for receiving federal voluntary cost-share funding. While NRCS Standards generally address many potential water quality impacts associated with manure applications, especially for operations with fewer than 1000 Animal Units, they often do not go far enough to address federal CAFO rule requirements nor do they go far enough ensure that water quality standards are met when dealing with some to the unique issues associated with operations the size of large CAFOs. For example, NRCS Standard 590 is primarily a nutrient management standard with water quality protection of lesser emphasis. Department staff participated in the revisions to NRCS Standard 590 and during the process pointed to areas where the standard would need to be revised or added to in order to address federal CAFO nutrient management requirements or to insure water quality is protected under NR 243.

Department staff also recognized that resources and level of oversight and the expectation of performance vary greatly between smaller and larger-scale operation and these factors are expressed in the regulation of large CAFOs as part of the NPDES/WPDES permit program. While the Department continues to support the NRCS Standards and other state voluntary and regulatory programs, we believe the additional restrictions in NR 243 are warranted and necessary when addressing the unique potential water quality impacts associated with CAFOs.

13. Comment: Revisions that result in an increase in the time and number of review are not acceptable.

Response: See response to comment #2., section III.

14. Comment: A number of producers and producer groups indicated concerns about the impacts the proposed rules will have on the livestock industry in the state of Wisconsin. Commenters indicated that the livestock industry is crucial to the state of Wisconsin and that the rules are too costly and could have a significant economic impact on the state by impeding or stopping the growth of the livestock industry and associated industries (e.g., cheese making). A comment indicated that more money spent on regulation means less money will be spent on innovation. A producer consultant submitted three case studies of dairy operations which will or could be impacted by the revisions, and outlined potential costs to the operations resulting from revisions.

Other individual citizens and conservation and advocacy groups commented that the rules were not too expensive. One comment referenced the fact that municipalities and industries have spent $3 billion dollars on water quality protection. One comment stated that additional regulations are needed because minimal regulation is often used to protect the bottom line; not human health. A producer commented that he is not sure if the dairy industry will be sacrificed because the EPA will not allow improper operation in any state. An environmental advocacy group expressed concern about the numerous concessions the DNR has already made to interests supporting industrial agriculture in Wisconsin and submitted a number of specific comments to prevent further weakening of the DNR's proposed revisions.

Response: Some changes made. The Department recognizes the importance of the livestock industry to the state of Wisconsin. The Department has made a number of changes to address potential economic impacts to the livestock sector. One example of this effort is the revision to the method in how animal units are calculated. These changes will result in an additional 10-15 operations being defined as a CAFO compared to the over 300 operations some producer groups indicated would become CAFOs. In general,

the Department believes it has created a rule that balances the need to protect water quality and ensure that the livestock industry remains strong in this state.

The Department has analyzed costs associated with the proposed revisions and believes that they are generally consistent with the costs submitted by the producer consultant mentioned in the comment. In general, the Department believes that the submitted costs were higher than would be expected, especially as it relates to runoff control systems. Under current federal and state CAFO rules, operations of the size provided as examples (medium CAFOs) with discharges to navigable waters from feed storage areas and exposed feedlots/barnyards, are required to address these discharges or apply for WPDES permits. It is possible that these operations would already be required or have already installed the necessary controls to avoid discharges to navigable waters. In addition, it should be noted that one of the three potentially impacted operations would no longer be impacted based on revisions to the public noticed version of the rule.

15. Comment: A number of producers and producer groups commented that the Department's proposed rule is inconsistent or exceeds federal CAFO requirements. These comments indicated that this will result in confusion and competitive disadvantages for Wisconsin's livestock industry. One producer group referenced a concern that Wisconsin will be a regulatory island as a result. The group stated that the proposed rule revisions are contrary to Governor Doyle's Grow Wisconsin Initiative, creating regulatory barriers via administrative rules that put Wisconsin producers on an unfair and uneven playing field. The group also referenced s. 283.1 1 (2)(a), Stats, that requires that all rules promulgated by the Department related to point source discharges, **comply with and not exceed** federal rules and requirements. Areas where this is a particular concern include:

- Requiring large concentrated animal feeding operations to apply for a permit when there is no actual discharge of pollutants from the production area of the facility;
- Exceeding the inspection, monitoring and recordkeeping requirements of the federal rule;
- Mandating a minimum of six month's storage capacity for liquid manure; and,
- Requiring CAFOs to develop a nutrient management plans for CAFO manure applied to lands the CAFOs neither own nor control.

Response: The Department believes CAFOs can operate profitably and manage manure and process wastewater in accordance with the revisions to NR 243 and in a manner that protects Wisconsin's waters. The Department disagrees that DNR's proposed regulations will make Wisconsin a regulatory island. Many states in US EPA Region V have retained the duty to apply for all large operations over 1000 animal units and many have adopted regulations that are more stringent than the federal regulations (see bullets below regarding comparisons to other states). Like the WDNR, many states in Region V have adopted more stringent regulations because they recognize that "one federal regulation doesn't fit all states" and the federal regulations aren't necessarily adequate to protect water quality.

As for Wisconsin laws, the Department may be more stringent than federal regulations in some areas. For example, regulations for CAFOs may be more stringent when necessary to meet water quality standards and to protect groundwater. Under Wis. Stat. ss. 283.01 and 283.31, Wisconsin's WPDES permit program is required address discharges to groundwater and to establish requirements that comply with state water quality standards. Furthermore, in Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W. 2d 720, the court explained the scope of stringency provisions in s. 283.11(2)(a). Specifically, the court stated that uniformity provision arguments based on the language of Wis. Stats. 283.11(2)(a) are only compelling "where the EPA imposes specific discharge limits from defined categories of pollution sources", and such arguments will not have the force of limiting the Department's authority where the EPA has chosen not to regulate in a specific area or "where the permit conditions involve not effluent limitations per se but rather preventive environmental practices, including maintenance of a manure management plan, a daily log and an annual spreading report." Maple Leaf Farms, 2001 WI App at ¶ 20.

The Court reasoned correctly that the Department can't be limited from imposing more stringent requirements if the EPA had not set parallel requirements in the first place. In order for a Wisconsin court to apply the uniformity provision after Maple Leaf Farms, a party will need to be able to point to a categorical standard or limitation covered in Wis. Stat. 283.11(2)(a) that has been set by the federal government, and upon which the State of Wisconsin is attempting to apply a more stringent standard or limitation.

In essence, what the Maple Leaf Farms case achieved was to clarify that the uniformity provision doesn't place a broad obligation upon the State to blindly imitate federal water pollution control standards. Instead, the provision establishes certain narrow circumstances under which the Department may not impose more stringent limitations than those set by the federal government. The uniformity provision has a useful purpose, but if we extend its application beyond the scope intended by the Legislature we would frustrate the provisions' purpose and threaten Wisconsin's autonomy in protecting the waters of the State.

Other states:

- Duty to apply: Minnesota and Michigan have retained an automatic duty to apply for CAFOs. Indiana and Michigan have retained a duty to apply based on potential to discharge.
- Mixed animal units: Minnesota and Iowa have retained a combined animal unit calculation
- Adequate storage: DNR does not believe there is any validity to the argument that the proposed regulations are more stringent than federal regulations because EPA has given states the flexibility to develop their own definitions of adequate storage (the proposed federal regulations do not give a specific definition of adequate storage). However, simply for purposes of comparison other states have required liquid storage capacity as follows: Illinois-120 to 270 days, Indiana-180 days, Michigan-180 days, Minnesota-270 days, Ohio-120-180 days
- Transfer of manure: In Iowa, CAFOs retain responsibility for all manure, except for dry poultry manure that is sold as a product.

16. Comment: A producer group requested that the Department prepare a comparison between the cost of compliance with NR 243 (as proposed) and the costs of complying with similar NPDES implementation rules in border states, including Illinois, Iowa, Minnesota and Michigan.

Response: While the Department has not completed an analysis of the cost of compliance with NR 243 compared to border states, it has included a private sector impact report outlining the cost of the proposed revisions for the Wisconsin producers. In addition, the Department has outlined regulations in neighboring states as part of the rule analysis contained the Green Sheet package for NR 243 adoption.

17. Comment: A number of commenters indicated concerns about the presence of CAFOs in the state of Wisconsin and believed that there should be a moratorium on CAFOs or a cap on the number of CAFOs allowed in the state and encourage product prices that support small operations.

Response: No change made. The Department works to ensure protection of water resources regardless of the size of operation. The Department has no authority to cap, stop CAFO expansions or address the prices farmers obtain for their products.

18. Comment: There needs to be adequate funding of the nonpoint source rules.

Response: No change made. The Department has been working with it partners to promote proper funding for implementation of agricultural performance standards under NR 151.

19. Comment: CAFO Owners should live within 500 feet of their operation.

Response: No change made. The Department does not have authority to address this issue.

20. Comment: The Department should lower the permit threshold from 1000 to 700 animal units.

Response: The Department believes that other regulatory and voluntary programs are in place to address impacts from animal feeding operations with fewer than 1000 animal units. Where warranted and in a limited number of circumstances, the Department has the ability to designate operations with fewer than 1000 animal units as a CAFO on a case-by-case basis. Other alternatives are available as well.

21. Comment: A number of producers and producer group representatives expressed a concern that the Department needs to work with producers.

Response: Partial change made. Throughout the NR 243 code revision process the Department has engaged producer groups. The Technical Advisory Committee (which contained producers, producer group representatives, and agency staff that worked with producers), met 14 times over a period of 18 months and provided excellent input into the rule revision process. In addition, the Department held five hearings throughout the state and an additional eight informational sessions to facilitate producer input into the process. In order to provide additional time for affected groups to become informed about NR 243 and provide us with comments, the Department extended the comment period from September 9th to October 14th.

The Department has considered all comments received by producers and their representatives and has made a number of modifications to the proposed rule in response to those comments. The Department looks forward to working with all stakeholders to address impacts from livestock operations of all size.

22. Comment: Producers and producer group representatives expressed concerns that the proposed revisions to NR 243 are not needed because they focus on farmers that are already in compliance. Comments indicated that CAFOs do a good job as environmental stewards and are more likely to comply with regulations than smaller-scale farms. Concerns were expressed that the rules were penalizing all CAFOs because of the acts of a few bad actors.

Response: No change made. The Department recognizes that many larger-scale producers are already implementing many of the practices proposed in revisions to NR 243. For these producers, the rule revisions will not significantly impact their operations. However, the rule revisions are needed to ensure that all CAFOs are performing at the same level. There is a water quality benefit to revising NR 243 to reflect what many producers are already doing to provide a level regulatory playing for all producers and to ensure improved implementation of best management practices. In addition, most of the revisions to NR 243 are a direct response to revisions to federal CAFO rules which the Department must reflect in NR 243 in order to maintain delegation to implement the NPDES permit program for CAFOs.

23. Comment: A number of producers, producer groups, members of the public and environmental advocacy and conservation groups express concerns that not enough is being done to address impacts from farmers of all sizes, especially farmers with fewer than 1000 AU, that are not in compliance with state rules. CAFO operators indicated concerns about equal treatment compared to smaller-scale operations and the need for one set of consistent nutrient management rules to follow. The land and the resource do not care if the manure is being generated from a large CAFO or not. Environmental advocacy groups supported efforts to permit operations with fewer than 1000 animal units. For example, one group recommended that proposed s. NR 243.26(1) and (2) be amended to require WPDES permits for all medium size and smaller CAFOs that discharge to groundwater in addition to navigable waters.

Response: Partial change made. The Department recognizes that operations with fewer than 1000 animal units also impact water quality. The Department will <u>not</u> require permit coverage for every medium and small farm in the state. The Department has proposed a change that states that if a medium-sized or small-sized farm causes the fecal contamination of a water supply well, then the Department may require WPDES permit coverage for that operation – see change to s. NR 243.26. The Department has clear authority to address impacts from operations with 1000 animal units or greater under the NPDES/WPDES permit program; however, there are a number of federal, state and local regulatory and

voluntary programs that are designed to address impacts from smaller-scale operations, in addition to the WPDES permit program.

24. Comment: Comments were received indicating that other sources of water pollution (e.g., runoff from urban areas) should be addressed in addition to farms.

Response: No change made. Pollution from urban areas is addressed under NR 151, NR 216 and other point sources covered under the WPDES permit program. It should be noted that greater than 5,000 non-agricultural industries are regulated under these rules. Fewer than 160 livestock operations are currently regulated under NR 243.

25. Comment: Many producers and producer group representatives commented on the need for more farmer education to avoid water quality impacts.

Response: No change made. The Department agrees that more farmer education is needed and supports those efforts.

26. Comment: A number of producers and producer group representatives requested that the Department base its rules on science and common sense. In particular, a number of comments stated that the Department should work closely with Discovery Farms to incorporate the results of the project's applied research. Additional comments indicated that additional research from Discover Farms and the Pioneer Farm in Platteville is needed. These groups and an environmental advocacy group supported Department coordination with Discovery Farms and utilization of data promptly as it is developed.

Response: No change made. The Department has and will continue to support the efforts of the Discovery Farms. Some restrictions included in the rule are based on information available from Discovery Farms and are designed to address field conditions regardless of the time of year (e.g., setbacks, limitations on loading rates for application on frozen/snow-covered ground). In addition, restrictions have been included that are designed to address when these conditions are most likely to result in impacts to water quality ("high-risk winter period") which is also based on Discovery Farms data.

Based on the comments received, the Department has attempted create a rule based on common sense and science that balances federal CAFO rule requirements, state water quality protection concerns and accepted agricultural best management practices. As additional data becomes available, that data will be considered as part of the WPDES permit program for CAFOs.

28. Comment: A number of producers commented that the Department should only regulate CAFO production areas and not land application activities. Comments indicated that CAFO land application activities are more appropriately regulated as a nonpoint source of pollution.

Response: No change made. The Department has historically regulated CAFO land application activities as part of the WPDES permit program in order to ensure that waters of the state, including groundwater, are protected. The federal *Waterkeeper* decision has upheld the NPDES permit programs authority to regulate CAFO land application activities.

<u>NR 243.03 - Definitions</u>

29. Comment: Ancillary Service and Storage Areas - These areas are adjacent to but not a part of the production area and are defined to include raw material storage areas and the like.

Response: No change made. It is correct that ancillary service and storage areas are not part of the production area. Ancillary service and storage areas do not, however, include raw material storage areas because under the federal regulations, raw material storage areas are part of the production area. These definitions are consistent with federal regulations.

30. Comment: Animal Feeding Operation – A comment suggested changes to the definition of animal feeding operation.

Response: No change made. This suggested change to the definition of animal feeding operation is not consistent with federal regulations.

31. Comment: Conduit to Navigable Water – A producer group comment suggested that the definition is overly broad and unreasonable as applied and, in particular, as applied to Surface Water Quality Management Area (SWQMA). A conduit to a navigable water should be defined as limited to those features that have a direct connection via channelized flow to navigable water. Including indirect connections and tiled fields within this definition would make potentially every acre in Wisconsin, other than those entirely internally drained fields, defined to be a "conduit to navigable water." Other producers also urged the removal of tiled fields from the definitions of conduit to navigable waters. Comments indicated concerns that an expansive definition of conduit to navigable waters would unjustifiably eliminate a large amount of cropland from receiving nutrients.

A number of comments were also received from individual citizens and environmental advocacy groups in support of including tiled fields in the definition of "conduits to navigable water."

Response: Partial change made. The Department has added a note to the rule clarifying the status of subsurface drainage systems. The Department's definition of "conduit to navigable water" addresses those areas that meet the federal rule and that serve as direct connections via channelized flow. Except for those features present at the surface in fields (open tile line intake structures), subsurface drainage systems (drain tiles) are not included in the definition. It should be noted that the SWQMA restrictions do not prohibit application of manure or other nutrients near these conduits and flexibility is allowed in the rule to address other practices than those specifically identified in the code.

32. Comment: The Department should define the term "discharge."

Response: Discharges are defined in a number of ways within the context of the rule, primarily as the means by which pollutants associated with manure and process wastewater reach waters of the state.

33. Comment: Define frozen ground as soil that is frozen such that manure cannot be properly incorporated or injected.

Response: The Department had originally attempted to define frozen ground in the manner indicated above. However, the Department found that by tying a restriction on applications on frozen ground to the capability that manure could be properly incorporated or injected was circular logic and did not provide for implementation of appropriate practices.

34. Comment: Commenters expressed concern that the definition of frozen ground may have unintended consequences including decreasing the window for surface application of liquid manure in the fall and early winter of the year (late October - December). For farms using no-till farming systems, this will require either additional storage or force producers to quit spreading in the early winter and anticipates favorable spreading conditions in the spring. Applications should be encouraged, not frustrated to spread in the late fall (Nov - Dec) and even into January depending on weather and soil conditions, in part because of potential water quality issues associated with applying manure in the spring.

Response: The proposed rule does allow surface applications of solid manure on frozen or snow-covered ground in the fall and winter, except for the months of February and March. While the Department agrees that applying manure in late fall may be beneficial to avoid potential compaction and runoff issues in the spring, it does not make surface applying liquid manure on frozen or snow-covered ground conditions in the fall any less risky. Other comments have indicated that it is important to identify weather and soil conditions under which it can easily be predicted that runoff will occur. While the Department agrees that

it is important to identify these conditions, the Department also believes it is important to identify conditions and practices that will avoid impacts associated with conditions that are not easily predicted, such as those conditions resulting from the unpredictable nature of weather. Rains could occur in the late fall within days of liquid manure being surface-applied on frozen or snow-covered ground and cause water quality impacts. There may be situations where no-till farming, liquid handling systems and weather conditions may necessitate additional storage or more intense planning efforts to avoid potential water quality impacts. The Department is requiring six months of storage because it is a level of storage that most CAFOs have already achieved and provides the minimum amount of storage that is likely to be required to avoid impacts associated with applications on frozen or snow-covered ground. The Department recognizes that some operations may choose or need to build more than six months to balance winter spreading restrictions with nutrient management, soil conservation efforts and individual preferences. If an operation chooses to have the minimum amount of storage required, it is possible that the operation will need to identify fields where manure can be injected or incorporated without exceeding tolerable soil loss in order to avoid acute impacts associated with surface applications of liquid manure in the winter.

35. Comment: A comment noted that based on the definition of frozen ground in NR 243, farmers are actually planting corn in frozen ground in April.

Response: Defining a condition of frozen ground based on when it is appropriate to plant a crop as opposed to when it is appropriate to surface apply manure in order to avoid runoff, are two very different things. Corn seeds and manure are two very different materials that are far removed from each other in terms of potential to impact water quality under the conditions described in the definition of frozen ground in NR 243.

36. Comment: The definition of "karst feature" is too narrow and should be replaced with the definition of "direct conduits to groundwater" in NRCS Standard 590.

Response: Change made.

37. Comment: The definition of navigability is problematic.

Response: Changes to the definition of "navigable waters" cannot be addressed through revisions to NR 243

38. Comment: New source CAFO means any of the following: The reference to "ANY" of the criteria in the definition of new source CAFO should be replaced by "ALL" as it was discussed during NR 243 Technical Advisory Committee meetings.

Response: No change made. In accordance with federal law, a new source CAFO is an operation that meets <u>any</u> of the criteria outlined in the definition of "new source CAFO."

39. Comment: Non-Liquid poultry manure handling. - The Department needs to add the Belt Battery cage system of manure handling to this definition.

Response: Partial change made. The definition has been deleted.

40. Comments: Liquid poultry manure handling system – The definition currently includes stacked or piled manure that is exposed to rainfall. The rule needs to be clarified to indicate that headland stacking is part of a non-liquid system.

Response: Partial change made. The definition has been deleted.

41. Comment: Reviewable Facility or System - Feed and other raw material or storage areas which are not part of the production area generating manure or other process wastewaters should not be the subject of this rule, but rather should be handled pursuant to the stormwater program and NR 216 as discharges associated with industrial activities.

Response: No change made. Under 40 CFR 122.23(b)(8), the definition of production area includes feed storage areas and other raw materials storage areas. Specifically, the definition states, "*Production area* means that part of an AFO that includes the animal confinement area, the manure storage area, the **raw materials storage area**, and…The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials…" {emphasis added}. Also see 40 CFR 412.2(h). Under federal regulations, the production area must be subject to these requirements – see 40 CFR part 122 and 412.

42. Comment: A number of comments wanted changes made to the definition of "solid manure," especially in light of the fact that the code has different requirements for solid manure depending on the percent solids of the manure.

Response: No change made. The definition of solid manure is primarily used to differentiate between land application restrictions related to frozen or snow-covered ground for solid and liquid manure. Other sections of the code use percent solids as the basis for additional restrictions related to other manure handling activities (e.g., manure stacking).

<u>Agricultural Stormwater</u>

43. Comment: Some comments were received in support of the requirement in NR 243.14 that manure shall not pond on runoff the application site. One commenter viewed the agricultural stormwater exemption as a huge loop hole for potential medium CAFO's to move the manure offsite to a site that can cause problems.

A producer group commented that the provision for allowing discharges of agricultural stormwater not subject to the WPDES permit program is in conflict with the provision (i.e., NR 243.14(2)(b)) that provides that manure may not pond or runoff the application site at any time.

A producer group suggested changing s. NR 243.14(2)(b)1 to clarify that manure or processed wastewater may not pond on or run off the application site or otherwise leave the field "at the time of application" in order to give meaning to the agricultural stormwater exemption and to be consistent with the federal program. Without a clarification the agricultural stormwater exemption in proposed s. NR 243.14(2)(a) is circular and ineffective.

This comment was mirrored in a number of producer comments expressing concern that farmers shouldn't be held accountable for an act of God, or unpredictable weather. One commenter questioned, "What if we get a 20" rain?" Another producer recommended that the requirement that manure and process wastewater may not pond on or run off the application site or leave the field via subsurface drains should only apply during a limited period surrounding the application time (within a 12 hour period of application).

Response: Partial change made. The Department has proposed a revision to the restriction that manure and process wastewater may not runoff the site <u>at any time.</u> Specifically, the revised definition of "agricultural stormwater," when considered with the revisions to s. NR 243.14(2)(b), allows runoff to surface waters from land application areas when the runoff is associated with a 25 year, 24 hour storm event and where the permittee has complied with chapter NR 243 and the permit. Merely moving manure off-site does not qualify as a discharge of "agricultural stormwater."

44. Comment: A comment expressed concerned that enforcement of the manure management rule is focused on manure and not on the chemical components of manure. The proposed rule seems to indicate that the components of manure may be the regulatory target. If manure is discharged, there should be the

prescribed enforcement, but the enforcement should not go to the level of the components of manure as it is impossible to correctly assess the source of any possible contamination in a watershed (e.g., phosphorus from tree leaves versus manure).

Response: No change made. Federal and state regulations are intended to address both the materials that are the source of pollutants (manure and process) as well as the components of those materials (phosphorus, nitrogen, BOD, pathogens, etc.).

NR 243.11 – Large CAFOs

45. Comment: A producer group suggests that revisions are included that secure the concept of a permit application shield following application for a WPDES permit but before the Department issues the permit. The comment further suggests that this application shield is important given current Department staffing and workloads. The State has granted broad authorization to the Department to establish and administer the WPDES program. See, e.g., *Maple Leaf Farms v. DNR*, 247 Wis. 2d 96 (Wis. App. 2001). S. 283.37(1), Stats., and s. NR 200.10 that provide authority for such an approach by the Department. This comment must be combined with other comments (applicable to the definition of Animal Feeding Operation) that only large CAFOs that have an actual discharge of pollutants have a duty to apply for a WPDES permit.

Response: Under federal and state laws, a point source, including a CAFO may not discharge to waters of the state without a WPDES permit. The department is not aware of any allowance under state or federal law for a "permit shield" for a discharge to navigable water where a CAFO simply has a pending WPDES permit application, but no permit. See Wis. Stat. s. 283.31(1), 33 USC 1311(a), 40 CFR122.23(d)(5), 40 CFR 122.3. Note: Under federal law there is a "shield" in 33 USC 1342(k) for discharges covered by and in compliance with a NPDES permit.

46. Comment: A large number of producers and producer groups commented in opposition of the continued use of the mixed animal unit (AU) calculation and supported the use of the individual animal unit calculation required under federal law. Opposition to the mixed AU calculation centered around the fact that it exceeds federal requirements, it will increase the number of permitted operations (potentially over 300 new broiler and dairy CAFOs) which will negatively impact growth of the livestock industry as well as tax limited Department resources to address the additional permit workload.

A number of environmental advocacy and conservation groups and individual citizens support the DNR's retention of the mixed animal unit calculation. Reasons for support included maintaining regulatory authority over existing CAFOs in Wisconsin, its consistent with current NR 243, it makes common sense in comparison to the federal method given that manure is manure. Loss of this authority would significantly harm surface waters and groundwater. A number of advocacy and conservation groups commented that many CAFOs in Wisconsin still have different types of livestock, making the mixed animal unit calculation a more appropriate tool for managing the different types of manure generated by CAFOs.

Response: Partial change made. The Department has modified the proposed rule to include the same combined or "mixed" animal unit (AU) calculation that is required under the current NR 243 (i.e., one that does not use the more restrictive federal animal unit equivalencies). In addition, the Department has included an individual animal unit calculation (one that doesn't add animal types together at an operation) using the more restrictive federal animal unit equivalencies. Maintaining the current mixed animal unit calculation will avoid a rollback of regulations that have been in effect for over 20 years and ensure that operations will be regulated more equitably. Unlike other parts of the country that have seen specialization in raising individual animal types, Wisconsin continues to have mixed-animal type operations. Without the mixed animal unit calculation, under the federal individual animal type calculation an operation that has 999 AUs of milking cows and 999 AUs of heifers, would not be required to obtain a WPDES permit while an operation with 1000 AUs of milking cows would be required to obtain a permit.

As for the statement that the Department's proposed rules cannot be more stringent, in accordance with state law, Wisconsin can have regulations that define point sources differently than federal regulations.

47. Comment: One comment recommended revising the animal unit calculation to insure that the calculation accurately reflects the actual weight of animal present on an operation as opposed to the less precise EPA animal unit methodology.

Response: Partial change made. The Department has proposed to continue to use the equivalency numbers in the current version of NR 243 for the mixed animal unit calculation. In compliance with the federal law, the federal animal unit numbers will only be used in the individual animal unit calculation.

48. Comment: A producer didn't understand the need for s. NR 243.11(4) and questions the Department for including it. An operation is either a CAFO based on having over 1000 animal units or due to a discharge event. What is the purpose of this section?

Response: There have been several instances where the department has received complaints regarding an operation that has alleged the operation has 900-999 animal units. In addition, there are times when an operation has submitted an application indicating it has between 900-999 animal units where it appears that the operation is, in fact, above the 1000 animal unit threshold. In response to these issues, the Department may need to obtain additional information to verify the size of the operation and avoid potential violations.

NR 243.12 – WDPES permit application requirements

49. Comment: A producer group supported the proposed application requirements, subject to issues associated with the duty to apply, although some producers/producer groups opposed the 12 month application time-period. Some comments indicated that requirement to apply for a WPDES permit 12 months in advance is an unreasonable time requirement when purchasing a new farm.

Response: Partial change made. The Department believes that the proposed 12 month/6month application requirements provide benefits to the Department and producer alike in terms of preparing for potential regulations that could impact expansions. However, the Department recognizes the need to address purchases of nearby operations. In accordance with federal law, s. NR 243.12(1)(c) has been created to allow operations that become a CAFO as a result of purchasing another operation up to 90 days to apply for a permit. For concerns regarding duty to apply issues, see response to comment #50 of this section.

Duty to apply

50. Comment: A number of producers and producer groups commented in opposition of the duty to apply for all CAFOs in the proposed code. In particular, comments referenced the *Waterkeeper* decision that vacated USEPA's requirement that CAFOs with a "potential to discharge" had a duty to apply for a National Pollutant Discharge Elimination System ("NPDES") permit. A producer group indicated that USEPA has indicated its response to the *Waterkeeper* case will be to clarify that only CAFOs that actually have a discharge *from the production area* of the operation have a duty to apply for an NPDES permit. Therefore, the Department's duty to apply requirement conflicts with s. 283.11(2)(a), Stats., and the Legislature's position that Wisconsin CAFO rules be no more stringent than those developed by the federal program. Therefore, the Department should only require operations to apply for a permit when there is a determination of an actual discharge of pollutants to waters of the state. Comments also strongly objected to the explanatory note beneath s. NR 243.12(1)(c) stating that all CAFOs that land apply manure have discharges to groundwater. A producer group commented that this would mean the Department would have jurisdiction over all 16,000 dairy farms in Wisconsin under the WPDES permit program and thus would exceed the Department's authority. Others commented that they did not believe that all land application activities resulted in discharges to groundwater.

A number of environmental advocacy and conservation groups and individual citizens supported the duty to apply requirements in the public notice version of s. NR 243.12(1). An advocacy group commented that it is clear that the DNR has the authority and obligation under state law to continue to require WPDES permits for all large CAFOs, despite the *Waterkeeper* decision since the DNR must ensure compliance with groundwater standards, as water quality standards, in issuing WPDES permits. The group and others referenced 30 private well contamination events in 2004 and 2005 to demonstrate that discharges of manure to groundwater will occur from land application areas. The group referenced court decisions that have upheld the DNR's authority to regulate discharges to groundwater from land application of manure by CAFOs through the WPDES permit program. *Maple Leaf Farms, Inc. v. DNR,* 2001. Further, the advocacy group stated that the court decision made clear that that the DNR had the authority to regulate off-site manure spreading activities by a CAFO to prevent discharges of manure to groundwater and surface water.

Another commenter believed that if an "Agricultural Stormwater" event is likely to occur such as snow melt or a significant rainfall, then the operator should be subject to the WPDES permit if land applications result in a discharge to waters of the state.

Response: Some changes to rule made. Under ch. 283, Stats., all discharges to waters of the state, including groundwater require a WPDES permit. The Department believes that current science supports that all manure or process wastewater storage systems leak some pollutants to groundwater and that land application of manure or process wastewater will result in a discharge of pollutants to groundwater. Studies such as "Agrochemical Leaching From Sub-Optimal, Optimal and Excessive Manure-N Fertilization of Corn Agroecosystems-Final Report" (Norman/Masarik, 2001-2003) and "Crop Management and Corn Nitrogen Rate Effects on Nitrate Leaching" (Andraski/Bundy/Brye, 2000), point to the leaching of nitrates from land application systems. In addition, clay lined storage structures have a designed leakage rates (maximum permeability rate of 1×10^{-7} cm/sec and a specific discharge limit of 500 gallons/acre/day (NRCS Standard 313, December 2005)) and other structures have discharges associated with small structural defects (e.g., hairline cracks in concrete storage facilities, minor leakage at seams of synthetic liners) that, while not necessarily violations of water quality standards, do result in discharges of pollutants to groundwater. Therefore, all large CAFOs that land apply manure or process wastewater or that have storage structures at or below grade have actual discharges to groundwater, and in most cases surface waters, so consequently all large CAFOs shall apply for a WPDES permit because they have actual discharges to waters of the state. The Department's proposed rules are consistent with the *Waterkeeper* case and the rules comply with Wis. Stat. §§ 283.001, 283.01 (12) and (20), 283.11 and 283.31 and the decision in Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W. 2d 720. In Maple Leaf Dairy vs. DNR, Court of Appeals upheld the DNR's authority to regulate discharges to groundwater from land application of manure by CAFOs through the WPDES permit program. In addition, the court found that DNR had the authority to regulate off-site manure spreading activities by a CAFO to protect groundwater and surface waters.

(Note: The Department also disagrees that the *Waterkeeper* decision limited the duty to apply to the production area discharges. At the federal level, except for agricultural stormwater discharges, actual discharges from the land application areas are also a basis for requiring permit coverage (also see discussion of agricultural stormwater discharges))

Medium and Small Size Farms: The Department has not, however, used these same factors for requiring a WPDES permit for medium or small sized animal feeding operations, and the Department's rule does not propose to issue permits to all 16,000 dairy operations in the state based on groundwater discharges. In general, the rule states that for medium and small farms, a WPDES permit is required for discharges to navigable waters, and the Department may require WPDES permit coverage in cases where a small or medium size farm has had a discharge that contaminated a water supply well. In most cases, other state regulatory and voluntary programs exist to address discharges to groundwater from medium and small size farms.

No potential to discharge

51. Comment: A number of producers supported the allowance for a "no potential to discharge determination." A producer group supported this provision, but noted that should the Department revise the rule to be consistent with the mandates of both the *Waterkeeper* case and ch. 283 of the Wisconsin Statutes, this provision is no longer needed because only those large CAFOs with an actual discharge will have a duty to apply for WPDES permits. The group also commented that Department staff has said in public that Department staff will never utilize this provision.

An environmental advocacy group objected to the "no potential to discharge" allowance in light of DNR's finding that all CAFO's discharge manure and nutrients to groundwater and surface waters from land application areas.

Response: Change made. The Department has deleted the no potential to discharge section – also see response to duty to apply). In addition, while Department staff has indicated that under the public noticed version of the code that it would likely be very difficult to demonstrate "no potential to discharge;" staff have not said it would never be used. Statements have been made that any allowance for "no potential to discharge" is far more likely in arid parts of the country. Given the extent of water resources in Wisconsin and the Department's authority to protect groundwater, it is not feasible to believe that a large CAFO that stores manure at or below grade or land applies manure would not have an actual discharge to waters of the state.

NR 243.121 - General Permit Coverage

52. Comment: A number of environmental advocacy and conservation groups and public citizens had concerns about the use of general permits for CAFOs. Concerns expressed included lack of public participation and notification, the inability for general permits to address unique operational concerns, and the lack of oversight for regulated operations. Comments were made that the Department could increase permit fees and fines to address staff resource issues rather than issue general permits. A comment was made to include public participation requirements for CAFO general permits. A producer also commented with the concern that a general permit would not account for individual circumstances. Siting antidegradation policies, an environmental advocacy group commented that the DNR cannot issue general WPDES permits for any CAFOs that apply liquid manure in watersheds draining to Fish and Aquatic Life waters, Exceptional Resource Waters, or Outstanding Resource Waters. Instead, these CAFOs must receive individual WPDES permits.

A number of producers and producer groups supported the use of general permits for reasons such as avoiding potential personal attacks that may be associated with public hearings, addressing reductions in DNR staff workload, potential cost savings, promotion of innovation and implementation of best management practices and the fact that the Department has been using general permits in other industrial sectors. A producer group commented that the Department should feel confident in its authority to develop the general permit program applicable to NR 243 given the holding in *Texas Independent Producers & Royalty Owners Ass'n v. EPA*

Response: No change made. The Department intends to establish a general permit program, but the Department recognizes it is important to address concerns about public participation when issuing general permits and when granting coverage to specific farms. The Department will be engaging advocacy groups to address this concern once the general permit issuance process begins but does not believe that such efforts should be codified.

The Department does not concur that under federal law, antidegradation clearly applies to discharges from permitted land application activities by CAFOs. Under federal law, it can be argued that discharges from CAFO land application areas that occur after compliance with the best management practices and conditions in the NPDES permit are considered agricultural stormwater discharges not subject to NPDES permit requirements, and therefore antidegradation does not apply.

53. Comment: It is unclear if this section of the code is for those that are seeking a general permit or for the Department to require a General Permit. If it is for the Department to require general permit coverage, Gold'n Plump is vehemently opposed to this section and believes that it goes far beyond the intent of Wisconsin law or federal requirements; Gold'n Plump asks that this section be removed or modified to clarify that it is for those seeking a general permit if that is the case.

Response: No change made. The primary purpose of this section is to ensure that applications for CAFO general permit contain as much information as individual permit applications. The Department has the authority to require coverage under a general permit and does not intend to modify that authority under NR 243; however, such a decision is subject to challenge by the permittee and historically permit coverage is granted with the consent of the permittee.

Green Tier

54. Comment: The Department received a number of comments in support of the Department's Green Tier program. The Legislative rules clearinghouse commented on the use of the term Green Tier in NR 243.

Response: Changes made. See response to comment #8, section III.

NR 243.13 – Standard requirements

55. Comment: A producer group commented that it believes both "CAFO outdoor vegetated areas" and "ancillary service and storage areas" should not be the subject of WPDES permits and rather, discharges from these areas should be governed by Wisconsin's NR 216 Stormwater Program. The group believes that Ancillary Service and Storage areas should be covered by the stormwater program of NR 216 and not be a part of the WDPES Permit designed to control manure and process wastewater discharges from production areas. We note that the same statutory prohibition against WDNR regulating point source discharges more stringently than the federal rules is present with respect to stormwater discharges. See, Wis. Stat. § 283.1 1(2)(b). Just as industrial facilities are often covered by both a WPDES permit for a direct discharge and a stormwater general permit for discharges associated with industrial activities, so too should a large CAFO be treated. Another comment indicated that there may be fewer permits associated with these requirements, but more regulation combining NR 216 requirements into NR 243.

Response: No change made. Inclusion of stormwater provisions will avoid double regulation/permitting and will not lead to double enforcement.

56. Comment: A producer group commented that if CAFO outdoor vegetated areas are not a part of the production area and maintains sufficient vegetative cover, it is either a pasture or should be subject to the s NR 216 stormwater comment applicable to the "ancillary service and storage areas" (see above). In either case, it is beyond the jurisdiction of NR 243 if there is no actual discharge of pollutants to waters of the state from this pasture or other area not a part of the production area. As such, it should not be regulated by this rule.

Response: Partial change made. CAFO Outdoor Vegetated Area requirements were revised and moved to the ancillary service and storage area requirements – see change to s. NR 243.12(7).

57. Comment: Since many operations are participating in the development of a Comprehensive Nutrient Management Plan ("CNMP") under various USDA programs, we encourage the Department to allow operators to point to their CNMPs (which include emergency response plans as a subset) to satisfy this requirement and request that the code specifically incorporate language which presents this as an option.

Response: No change made. To the extent that a CNMP addresses the requirements of NR 243, it will be acceptable. Since CNMPs are intended to address compliance with state rules, it is expected that emergency response plans developed in accordance with a CNMP will comply with NR 243.

NR 243.14 – General

58. Comment: Currently, municipal waste (sewer system sludge) and industrial products (whey, seep water from wet brewers and distillers, wet distillers, and wet brewer's grains, fat waste) are allowed to be spread throughout the winter months. These products have high BOD content, heavy metal content, plant nutrient content, or other potentially harmful constituents. The storage requirements for these products are controlled under NR 213 standards which require more stringent engineering and construction. Yet, all of the above products will be allowed to be applied to land surfaces anytime of the year. Explain the double standard in relationship to manure, the Clean Water Act, and more restrictive standard then at the national EPA level.

Response: See response to comment #125 of this section.

59. Comment: Hauler certification is needed.

Response: Mandatory hauler certification is not within the authority of ch. 283, Stats.

60. Comment: There were comments expressing general concerns about the environmental impacts associated with manure, in particular liquid manure, and the need for increased monitoring of manure spreading.

Response: While an important source of crop nutrients, liquid manure is more prone to spills and runoff than solid manure under dry and wet weather conditions. The Department has included a number of manure handling and landspreading requirements that are intended to address potential negative impacts associated with liquid manure.

61. Comment: The Department should only incorporate into its rule the nutrient management portions of NRCS 590. NRCS 590 (2005 version) contains other considerations not related to water quality and not intended when developed by the Standards Oversight Council ("SOC") to have a regulatory application in Wisconsin. A producer group commented that it participated in the last two revisions to Wisconsin's version of NRCS 590 and can therefore state with authority that the nutrient management standard was not intended to be incorporated wholesale as a regulation with the power of Department of Justice enforcement behind it.

Response: The Department has incorporated all sections of NRCS Standard 590, except for section V.D., related to air issues. Department staff also participated in the revisions to NRCS Standard 590 and believes that all remaining sections are relevant to protecting water quality.

62. Comment: The nutrient management restrictions in NR 243 should apply to all livestock operations in the state, not just CAFOs.

Response: Partial change made. Under s. NR 243.03(2), for operations with fewer than 1000 animal units, the definition of agricultural stormwater and allowable discharges to navigable waters from land application areas is tied to implementation of practices in NR 243. Operations that follow NR 243 and that have discharges to navigable waters would be exempt from potentially having to apply for a WPDES permit. In addition, the Department may designate small and medium operations that have discharges to navigable waters or that impact groundwater as CAFOs and subject them to the requirements of NR 243. However, this is done on a limited basis.

63. Comment: The nutrient management requirement submitted with the permit should include manure/land leases and at least a 3 year feasibility report with contingencies.

Response: No change made. Under s. NR 243(1)(b), the Department can require additional information on available acreage where available landspreading acreage is limited.

64. Comment: Item 243.14(1)(b) states that a Nutrient Management Plan may require verification to apply on land not owned by the permittee. An operation commented that it has a large database of customers and has been selling manure in excess of 25 years and thus does not necessarily have a specific field to utilize (spread on) at some future date. It utilizes a Sales and Marketing staff that sells to local farmers and provides documentation for necessary and required Nutrient Management Plans.

Response: No change made. DNR believes that in the interest of flexibility, operations may demonstrate adequate land base in a number of ways.

65. Comment: Section NR 243.14(l)(c) A producer group requested a presumptive approval of a plan amendment if no response is received from the Department within 30 days of submittal of the amendment. This comment is based on the dynamic process of nutrient management planning that cannot wait extended period for written approval from Department staff, which is already understaffed for nutrient management planners. Since nutrient management plans are developed by either certified professionals or trained owners, the process should be made to be as least cumbersome as possible.

Response: Partial change made. See 243.14(1). The code has been modified to allow the department to establish a condition in the WPDES permit that allows for implementation of certain types of nutrient management plan amendments without, or prior to, obtaining Department approval.

66. Comment: A producer group suggests the elimination of s. NR 243.14(2)(b)2 related to applications on saturated soil is duplicative of the performance standard defined in (b)l. of ponding on or running off.

Response: No change made. Both requirements are needed since ponding of manure and process wastewater may occur independently of application of materials on saturated soils.

67. Comment: A producer group objected to the vague language present at s. NR 243.14(2)(d) and recommends striking same. This provision appears advisory in nature as it requires the permittee to "consider" certain factors when making land application decisions; however, these factors in and of themselves are not a performance standard, effluent limitation, restriction or requirement. As such, the point of compliance is not able to be determined by the permittee rendering the provision vague and unenforceable from a due process perspective. We recommend this section be converted into an accompanying administrative code note.

Response: Change made.

68. Comment: A number of individual citizens and environmental advocacy groups commented in support of the additional groundwater protections in s. NR 243.14. Comments indicated that these protections may help minimize both acute manure discharges that can result in fishkills, and help protect public health by preventing groundwater contamination of private wells and community water supplies. Commenters referenced incidents of private well contaminations by manure, some from large CAFOs, that was spread at the wrong time. Although some commenters said that the requirements were not perfect, they believed they were an important step to protecting groundwater and preventing illness from exposure to contaminated water. Some comments related stories of people whose wells were contaminated by manure and the costs ($14,000) to replace the wells. Some comments indicated that the rules will be difficult to monitor and enforce and may not avoid all impacts, including nitrate contamination.

A limited number of producers expressed opposition to the restrictions designed to address groundwater. One producer pointed to the benefits to the soil by using manure as opposed to commercial fertilizer in areas of soils <24". One comment said that the alternative is to not grow crops in these areas.

Response: No change made. There are documented concerns with manure applications over shallow soils and in areas susceptible to groundwater contamination. The proposed requirements recognize the

potential for human health impacts result from bacteria and nitrates associated with manure application in these areas. NR 243 does not regulate fields where only commercial fertilizer is applied.

69. Comment: Comments were received requesting that 2nd year manure credit requirements be eliminated. One reason is that the Phosphorus Index system using the SNAP Plus program only allows operations to identify first year manure credits, or first, second and third year applications. Other comments referenced the fact that manure credits are not an exact science and variability of manure means that every load is slightly different, and no matter how good a manure applicator is, it is impossible to apply the nutrients evenly across the fields.

Response: No change made. The Department has a number of CAFOs that currently address 2nd year manure credits. While the Department recognizes manure variability and variability in application, 2nd year manure credits can represent a significant potential source of nutrients that could impact groundwater and surface water if not properly accounted for. The Department is working to address potential issues associated with the phosphorus index and SNAP Plus software.

70. Comment: Saturated soil is an important factor affecting the potential for manure to reach surface water. However, we need to establish a method that farmers can use to evaluate the soil moisture content. Discovery Farms has installed soil moisture probes with limited success. One producer is using this information to assess when field conditions are right for manure spreading, planting and other activities. Discovery Farms have soil moisture probes and could make that information available to producers throughout the state. We are learning more about how soil moisture affects field operations, but we do not have enough information at this time to make a recommendation. One farmer has been tracking soil moisture and has indicated that he has found this measurement to be very valuable to his operation. Based on his data, he knows the range of moisture where his fields are suitable for manure application, planting or other field operations. However, we are just starting to gather this information and are not ready to make recommendations at this time. Is there a simple (yet effective) means of determining soil moisture and saturated conditions? How will producers determine if a soil is saturated based on this definition?

Response: The Department has chosen not to codify a specific method for determining whether soils are saturated. NRCS Standard 590 has a simple method to determine when soil moisture levels are appropriate for applications.

71. Comment: A number of commenters, including Discovery Farms, discussed potential water quality impacts associated with subsurface drainage systems (drain tiles), and the need to address and/or better study these impacts.

Response: The Department recognizes the potential water quality impacts associated with drain tiles and the difficultly in determining acceptable best management practices to address these potential impacts. At this time, the Department is requiring only identification of drain tiles as part of the nutrient management plans (s. NR 243.14(2)(f))

72. Comment: One commenter requested that the rule provide some kind of compensation when a CAFO contaminates a well.

Response: While well compensation is not covered under NR 243, the state legislature recently passed legislation that would provide well compensation funds to people whose wells experience fecal contamination from livestock.

<u>NR 243.14 – Nutrient Management (Phosphorus)</u>

73. Comment: A number of environmental advocacy and conservation groups supported the concept of phosphorus-based nutrient management for livestock operations to mitigate negative impacts to water quality (i.e., eutrophication). However, a number comments expressed concerns about the allowances for

manure and process wastewater applications on fields high in soil test phosphorus either because the proposed rule, unlike the 590 Standard, does not call for drawing down soil test levels on those fields excessively high in phosphorus (150 ppm or greater). A comment was received that manure spreading should simply not be allowed on soils testing high in phosphorus.

A limited number of producer comments expressed concern over the concept of phosphorus-based nutrient management, the limitations on the science associated with the Wisconsin P-Index and the ability of the Soil Test P method to correlate to surface water impacts. One comment requested the continued allowance to spread on fields with soil test phosphorus levels of 200 ppm or more.

Response: The Department believes that phosphorus-based nutrient management is necessary to protect water quality and that the soil test phosphorus and the Phosphorus Index in the 590 Standard, with the additional restrictions in NR 243, are methods that can help to address phosphorus delivery to surface waters from CAFO land application activities. The Department also believes that applications on fields with soil test levels of 100 ppm or greater are acceptable provided the risk of delivery is controlled. The Department has proposed modifications to the requirements for all fields with soil test phosphorus of 100 ppm or greater to better address potential delivery from these fields (see response to comment #15, section II)

74. Comment: Phosphorus is not dangerous in fresh water, only salt water.

Response: No change made. Phosphorus is a limiting nutrient to weed/algal growth in many fresh water systems and thus is a significant contributor to eutrophication in fresh water systems.

75. Comment: Comments were received stating concerns about the proposed requirement that the method for assessing and minimizing phosphorus delivery must be consistent across all fields. This was viewed as unworkable given the hundreds of individual farmers that receive manure from CAFOs and their varied Nutrient Management Plans. Instead, NR 243 should provide the same flexibility allowed under NRCS standard 590 where producers select a method by FSA farm tract.

Response: Change made.

76. Comment: Item 243.14(5)(a)1. states that "increase in soil test phosphorus are prohibited". We recommend that this be modified to read, "increases in soil test phosphorus over the crop rotation are prohibited". This would mean that soil phosphorus levels would increase at the time of application and then over the course of the rotation would be mined back out.

Response: Change made.

77. Comment: The University of Wisconsin has determined that approximately 40% of our soluble phosphorus is mineralized and becomes insoluble as a result of the use of digesters. This suggests that when applied to land, the phosphorus is less likely to be soluble in rain water and runoff to waters of the state. Will phosphorous indexing account for the percent of soluble and insoluble phosphorus in the manure?

Response: The Phosphorus Index currently accounts for mineralization of phosphorus associated with digested manure that is applied to fields, through the inclusion of soil test phosphorus levels as a factor used in determining phosphorus delivery. The Phosphorus Index can be modified further to account for potential changes to soil buffering capacity and plant available phosphorus associated with materials such as digested manure. However, there is not enough data on how digested manure differs from other manures in these areas to warrant inclusion in the Phosphorus Index at this time.

<u>NR 243.14 – Nutrient Management (SWQMA Restrictions)</u>

78. Comment: Is it the Department's intent to limit commercial fertilizer applications within the SWQMA?

Response: No change made. The Department only has authority to regulate manure and process wastewater applications within the SWQMA. Applications of manure and process wastewater must take into account nutrient associated with applications of commercial fertilizer.

79. Comment: A number of environmental advocacy groups and individuals supported the SWQMA restrictions outlined in the rule. Reasons for support include the flexibility provided by the code, the need for vegetative buffers near surface waters and reductions in acute runoff events. Some comments requested more restrictive requirement by requiring injection and incorporation within the SWQMA or increasing setbacks in order to make them easier to implement or to protect water quality.

Response: No change made. The Department believes that the setbacks and application restrictions in the SWQMA are sufficient to protect surface water quality and that producer flexibility is needed and provided for in these areas with the proposed code language, including allowances to conduct no-till farming in order to address sediment loss and long-term phosphorus delivery.

80. Comment: Can an operator choose a different option each year or each time the spreader hits a field when spreading within the WQMA?

Response: No change made. Methods of application can vary each year or per application provided the method of application is specified and approved as part of the nutrient management plan.

81. Comment: The definition of "Conduit to Navigable Water" needs to be changed because it removes too much agricultural land from production. There is no justification for eliminating this land from receiving manure nutrients. More flexibility needs to be built into the rules for SWQMA restrictions.

Response: No change made. The proposed rule <u>does not</u> prohibit applications within the SWQMA, including areas within 300 feet of conduits to navigable waters. It does require practices be implemented in those areas, including practices proposed by the permittee on a case-by-case basis that achieve an equivalent pollutant reduction equivalent to a 100 foot setback from navigable waters and their conduits.

82. Comment: Comments were received requested reciprocal setbacks associated with manure and process wastewater requirements and other rule requirements.

Response: No change made. The Department does not have authority through the WPDES permit to require reciprocal setbacks.

83. Comment: The options for applying manure in a SWQMA should include the ability to surface apply liquid manure with a dry matter content of less than 4% on a growing crop.

Response: No change made. Such a practice would be evaluated on a case-by-case basis in accordance with the requirements of s. NR 243.14(4) provided it provides pollutant reductions equal to or better than a 100-foot setback.

<u>NR 243.14 – Winter restrictions</u>

84. Comment: Winter spreading restrictions similar to NR 243 should be drafted for "nitro-gro" and paper industry waste.

Response: See response to comment #125 of this section.

85. Comment: A producer group recommended that rather than the six month moratorium on liquid manure, that liquid manure should be able to be applied if the land is not frozen or snow covered. Depending on the year, farmers are planting small grains as early as February and March. See s. NR 243,14(6)(c).

Response: The restrictions on winter applications of manure do not include a complete moratorium on winter applications of liquid manure. The restrictions prohibit surface applications of liquid manure on frozen or snow-covered ground. Operations can surface apply liquid manure in the winter on non-frozen, non-snow covered ground, except for the months of February and March. In addition, liquid manure may be applied at any time during the winter, including February and March, provided it is injected or incorporated and physical conditions allow injection or incorporation.

86. Comment: It is not possible to inject or incorporate into frozen ground. It is not common sense.

Response: No change made. The Department defines frozen ground as ground that is frozen within the first 8" of soil, which may allow injection or incorporation. However, the Department recognizes that there may be situations where the ground is frozen at depths that prevent proper incorporation or injection. The definition is intended to limit surface applications during conditions that are susceptible to runoff as a result of snowmelt or precipitation by having some amount of unfrozen soil that can absorb moisture.

87. Comment: Include the 590 Standard's "direct conduits to groundwater" in tables 4 and 5 in lieu of karst features.

Response: Change made.

88. Comment: A number of environmental advocacy and conservation groups and individual citizens commented in general support of the winter spreading restrictions in NR 243. Commenters in support of restrictions on frozen or snow-covered ground referenced the inability of frozen ground to infiltrate water and the "epidemic" of runoff events and fish kills that occurred in Wisconsin during 2004-2005. A number of commenters recounted personal experiences such as a farm family who experienced health problems, including their young daughter's health, because their well was reportedly contaminated by a CAFO that did not have sufficient storage. A county staff person recalled numerous well contamination complaints where winter manure spread manure on fields concentrated in closed depressional areas without sinkholes visible at the surface. A comment indicated that the agricultural community needs to take responsibility for impacts associated with winter applied manure.

Producers and producer groups opposed the winter restrictions for a number of reasons. Many felt the requirements were overly prescriptive and costly and should be focused on educating and outreach efforts directed at producers and allowing for more producer judgment. Others pointed to the benefits of allowing winter applications of manure and questioned the science behind the restrictions. Benefits asserted include protection against wind erosion since wet manure freezes to the soil and acts like mulch. In addition, many commenters indicated restricting winter spreading will result in more April spreading which in turn can conflict with local road weight limit bans, will result in soil compaction and increased runoff and erosion, and exacerbate neighbor conflicts due to mud and traffic on roads. Other comments indicated that spreading in April is not preferred because it coincides with spring rains that may also result in more runoff and water quality impacts. Some producers also like to apply on frozen ground, especially on ephemeral frost, because it avoids compaction and avoids muddy roads. Comments also pointed out that the vast majority of runoff events have been associated with unregulated (i.e., non-CAFO/non-WPDES permitted) operations and the CAFO restrictions were an over-reaction that also comes at a time when the Department is participating in the joint agency Manure Management Task Force.

Response: Some changes made. The Department believes that based on staff experience with runoff events and available science, applying manure during the winter is one of the riskiest application practices and can have serious impacts on surface waters, groundwater and wetlands. It is a risk that is serious enough that US EPA has specifically identified frozen or snow-covered ground as a condition requiring additional restrictions. The Department believes that there is still room for producers to exercise their judgment and that NR 243 will ensure that all producers are regulated in a more consistent manner. The Department has attempted to reduce the potential negative impacts producers describe by allowing applications during the winter at times and under conditions that represent a low risk for runoff and groundwater impact. In addition, many producers are currently addressing these issues (e.g., road bans, traffic, compaction, muddy roads) using equipment or methods of application (e.g., drag lines, additional storage) to avoid these issues. The Department recognizes that concentrating applications in April could potentially result in water quality impacts and has tried to address those potential impacts in the rule (e.g., restrictions on applying on saturated soils and when precipitation is forecasted).

The Department believes that manure-related impacts from any size operation are a concern. The Department is currently reviewing the Manure Management Task Force recommendations. However, the recommendations do not provide any clear direction for addressing many of the unique issues associated with larger-scale operations nor do they take into account the requirements of the NPDES permit program. While the percentage of operations that had documented impacts and were permitted may be smaller when compared to nonpermitted operations, 5% of permitted operations were involved with the documented impacts (7 out of 145 operations). In addition, permitted operations produce approximately 11% of all the manure in the state by volume. This represents a significant potential source of impacts if not managed properly.

In response to potential concerns about costs and to reflect the additional time associated with NR 243 revisions, the Department has moved back the effective date for solid manure winter restrictions from January 1, 2007 to January 1, 2008.

Solid manure

89. Comment: Table 4: Requiring fall tillage for application on frozen ground is impractical for application purposes. Crop residue on fields such as soybeans is critical to meet "T" as well as soybeans are the preferred crop to winter apply manure for utilization by the upcoming corn crop.

Response: Tillage requirements are intended to provide surface roughness which limits the probability of runoff associated with winter applied manure. Solid manure may be surface applied on no-till fields during frozen or snow-covered ground conditions, except during the months of February and March. Without tillage or no-till practices, the risk of runoff is high and applications are not allowed.

90. Comment: The Department should allow solid manure applications to be surface applied on ground that is frozen with less than 2" of snow during February and March to allow no-till farmers to get on the land before spring seeding.

Response: NR 243 does not allow surface applications during frozen or snow-covered ground because of the increased risk of run off, especially given the increased potential for snow-melt or rain to occur during this time period.

91. Comment: Let farms haul solid manure on frozen & snow covered ground on non HEL (highly erodable land).

Response: Not all non-HEL land is suitable for applications during frozen or snow-covered ground conditions. The restrictions in s. NR 243.14 are intended to identify appropriate spreading areas.

Solid Manure - February/March

92. Comment: A number of producers and producer groups were against the restrictions on solid manure application during the winter, including prohibitions on surface applications during February and March. Some producer comments indicated that the prohibition of liquid manure spreading during February and March was warranted but that there was not enough reason to treat solid manure the same way. Comments in opposition to these requirements stated that solid manure spread on top of snow can be helpful in reducing spring run-off since it slows the rate of snow melt, that the restrictions were not warranted since the overwhelming majority of springtime run-off events are associated with liquid manure from nonpermitted farms, and that the restrictions will lead to applications during April to June when the soil is wet, leading to soil compaction, reduced crop yields and increased erosion as well potentially more runoff events. One comment mentioned there will be economic impacts associated with the restrictions since other states don't have a two month ban.

Advocacy groups and individual citizens that commented in support of the prohibition on surface applications of liquid and solid manure in February and March pointed to runoff events, research and documented manure-related events that indicate that February and March is a risky time to spread manure.

Response: No change made. While the majority of documented winter runoff events were associated with liquid manure, some events have been associated with solid manure. The Department recognizes that solid manure may be less susceptible to runoff and has provided for additional allowances for surface applications of solid manure during the winter in proposed NR 243. Other states require storage for solid manure and allow for manure stacking. Ohio prohibits the application of stackable CAFO manure on frozen or snow-covered ground.

93. Comment: Comments questioned why the Department chose February and March as a prohibition period as opposed to other months (e.g., December or January) and how this period addresses weather variability from year to year and for different regions of the state. Other comments wondered if the prohibition period should be extended for northern parts of the state to account for when frost leaves the ground.

Response: No change made. The Department based the February and March restrictions based on historical snow melt and temperature data from various locations throughout the state, as well as Department experience with runoff events in the state. Data indicates that this time period captures when conditions of snow-melt, precipitation and runoff are most likely to occur throughout the state. These dates were chosen as a means of minimizing runoff potential, not completely eliminating the risk, and recognize that producers will need to implement practices outside of this time period to address annual weather and geographic variability.

94. Comment: The prohibition beginning on February 1st will result in a functional/practical bar on spreading solid manure until September when crops are harvested. This could result in the construction of seven months worth of solids storage rather than the two months the code appears to require.

Response: No change made. The Department does not agree with the comment. If the assumption that producers do not apply solid manure during the times of the year when crops are grown, than producers would already have more than two months of storage for solid manure. In addition, a producer that chooses not to spread solid manure in the spring that was placed in a storage facility during February and March would only need to store the same amount of manure in the same structure for a longer period of time, not build additional storage.

95. Comment: A comment was made that the prohibition on surface applications of manure during February and March should not apply to internally drained fields.

Response: No change made. While applications on internally drained fields may not represent a surface water quality concern, applications of manure on internally drained fields are potential source of

groundwater contamination, especially during frozen or snow-covered conditions, should runoff occur that concentrates manure within the internally drained field.

96. Comment: How will the winter spreading restrictions impact daily haulers?

Response: The impact of the propose winter spreading restrictions on daily haulers will vary from operation to operation. Most daily hauled manure will qualify as a solid manure and thus can be surface applied during frozen/snow-covered conditions (except for February and March). During February and March, the operation will either have to incorporate the manure if the ground is frozen or snow-covered or provide storage for the manure. If the manure is stackable, (which may not be possible for some daily hauled manure) the operation could stack the manure during frozen or snow-covered conditions in lieu of surface applying the manure and providing 2 months of storage during February and March. The stacked manure could then be applied during non-frozen, non-snow covered ground conditions within the next 8 months.

97. Comment: Are the restrictions on liquid and solid manure applications in February and March based on temperature or soil conditions?

Response: No change made. Winter spreading restrictions are based on soil conditions and runoff potential.

98. Comment: Section NR 243.14(7)(f) - There were comments in support of and against allowances for emergency application of liquid manure. Some comments indicated the need to revise this section so that liquid manure that has frozen and cannot be transferred to a manure storage facility may be applied during the high-risk run-off period. Wisconsin can experience 5-10 days of extremely cold weather during this time period in which the manure in modern, curtain sided barns will freeze in the walk alleys making it impossible to pump to storage lagoons. Comments indicated that the only feasible method we have is to scrape it up, load it on spreaders, haul it to fields and spread it; therefore, an exemption is needed that will allow operations to spread this limited amount of manure on carefully selected fields.

Response: Partial change made. The Department believes allowances for surface applications on frozen or snow-covered ground as a result of legitimate emergencies is warranted. Land application in these circumstances is warranted compared to potential dangers associated with an overtopping manure storage facility. The section of the code related to frozen liquid manure has also been modified to clarify requirements for surface applications of frozen liquid manure, particularly as it relates to these applications in February and March.

99. Comment: The rule change states that if you plan to spread any solid manure on frozen ground, you need approved storage for the 2 month period of February and March. This is too restrictive. If the site where the manure is to be stacked is acceptable for stacking all winter, why not just stack for 2 months?

Response: Partial change made. In general, the allowance to stack versus store solid manure is an attempt to balance two different types of risk and costs. For operations that choose to surface spread solid manure during most winter months and have an NRCS Standard 313 structure available during February and March, the potential water quality benefit of an actual storage structure and the producer cost of the storage is balanced with the risk of allowing surface applications of solid manure on frozen or snow-covered ground during other times of the winter. For operations that stack manure, the risk of potential impacts to waters of state associated with stacking is balanced with the water quality benefits of essentially eliminating the risk of runoff from winter surface applied manure.

Based on Discovery Farms data on stacking drier types of solid manure, the proposed rule (NR 243.14(6)(d)2.) has been created to allow the Department to approve stacking of manure with greater than 32% solids during February and March, on a case-by-case basis, rather than build storage, and still allow surface applications during other times of the winter. While the Department agrees that properly sited

stacks of manure represent an acceptable level of risk as it relates to potential impacts to waters of the state, the Department does not agree that headland stacking provides the same level of protection as a designed storage structure, especially for certain types of manure, both in terms of potential management problems and potential runoff or leaching to groundwater. However, this new provision recognizes that certain types of manures under certain conditions, may prove to be as protective of water quality as providing constructed storage. The Department will consider a number of factors as part of this case-by-case approval, including study data that demonstrates stacking the solid manure does not pose additional risks to water quality in comparison to storing the manure.

Liquid manure

100. Comment: A number of advocacy groups and individual citizens commented specifically in support of the prohibition on liquid surface applications on frozen or snow-covered ground. Comments agreed that liquid manure poses a high risk of runoff to groundwater and surface waters not just February and March, these groups pointed to the 52 manure related event in 2004-2005, with 11 fish kills associated with liquid application on frozen snow-covered ground.

Response: No change made. The Department recognizes that all manure can be very beneficial as a nutrient and soil amendment. However, the Department agrees that liquid manure is more prone to runoff than solid manure, not just during the winter but at any time, and has included restrictions in NR 243 to address unique water quality concerns associated with liquid manure (e.g., hydraulic application loading restrictions on liquid surface applications near surface waters. The Department believes that additional restrictions for liquid manure are warranted based on documented impacts associated with liquid manure and the fact that liquid manure is more susceptible to runoff than solid manure due to its fluid nature.

101. Comment: A number of environmental advocacy groups and individual citizens proposed to shorten the compliance date for prohibiting surface applications of liquid manure applications on frozen or snow-covered ground. A number of comments indicated that the compliance date should be 2007 or 2008 rather than 2010 in order to avoid potential impacts to water quality and to protect public health (this was part of the comments received by 25 members of the Wisconsin League of Conservation voters). Others commented that the prohibition should be immediate for operations that already have six months storage, perhaps with a case-by-case exemption.

Response: No change made. See response to comment #23, section II.

102. Comment: The best time to spread is late March. This helps keep equipment and roads clean, most importantly it helps maintain a good soil profile; compaction is minimized. A judgment call about when to spread should be adequate.

Response: No change made. Applications in late March of liquid manure are allowed provided the manure is either injected or incorporated and the ground is not saturated. Surface application of solid manure is allowed provided the ground is not frozen, snow-covered or saturated.

103. Comment: Sometimes the only time producers can spread is on frozen ground because of weather variability.

Response: No change made. The proposed rule allows surface spreading of solid manure during most winter months and allows application during all winter months provided it is incorporated and the ground is not saturated. Prior to Jan. 1, 2010, the proposed rule allows surface application of liquid manure for existing operations that do not have 180-day storage, except during the months of February and March. Beginning Jan. 1, 2010, surface applications of liquid manure on frozen or snow-covered ground are limited to emergency situations. Operations can inject or incorporate liquid manure at any time on frozen or snow-covered ground provided it is feasible can be done properly.

NR 243.141 – Manure Stacking

104. Comment: A number of comments were received from advocacy groups and individual citizens in opposition to allowances for manure stacking. Primary concerns were the lack of science or consensus on the available science and associated concerns about runoff and leaching to groundwater and comments that the Clean Water Act requires storage in a structure. Some comments indicated that headland stacking should only be allowed on a case-by-case basis with direct Department oversight, provided the sites comply with 313 and any necessary additional restrictions.

An advocacy group also commented in opposition to allowing manure stacking. The group commented that federal effluent limitations for CAFOs only allow discharges from properly designed, constructed, and maintained structures that contain all manure and runoff from certain storm events. Proposed ss. NR 243.141 and NR 243.13 do not state that headland stacks meet the design exemption, nor do they state that headland stacks do not meet the design exemption despite the fact that headland stacks are not "structures." As a result, s. NR 243.141 violates 40 C.F.R. to the extent that it fails to make clear that all discharges to navigable waters (including intermittent tributaries to navigable waters) are prohibited from headland stacks.

Producer groups and individual producers supported manure stacking on pre-approved sites, although many commented that stacking allowances must take into account factors, such as bedding type, other than the percent solids of the manure. These comments indicated that if the manure will maintain its shape and not leach regardless of its solids content, it should be allowed to be stacked. One producer commented that covering stacks may be necessary and another comments referenced work done by Discovery Farms studying the stacking of turkey litter.

Response: Partial change made. The Department does not agree that the federal CAFO rules require storage structures and prohibits manure stacking. However, the Department does agree that manure stacks, by themselves, are not storage or containment structures; therefore, without associated containment or storage structures, stacks may not have discharges to navigable waters under any circumstance. A note has been added after s. NR 243.141(3)(e) to this effect. The Department recognizes that for certain manure types, additional practices, such as covering, may be necessary to meet permit and code requirements.

The Department believes that stacking of stackable solid manure in lieu of surface application on frozen or snow covered ground and in compliance with the siting and operational restrictions in NR 243, represents an overall benefit to waters of the state. Stacking during other times of the year will require case-by-case approval. NR 243 is consistent with restrictions on temporary unconfined storage of manure and believes that the percent solids categories in NRCS Standard 313 provide a means of preventing potential water quality impacts.

Also see response to comment #99 of this section regarding additional stacking allowances provided in the code in response to public comment.

105. Comment: Comments recommended that rather than setting a date of June 1st when headland stacks need to be removed, set a time limit that headland stacks may remain in the field. It was recommend that this time interval be seven (7) months to provide operational flexibility and to avoid compaction issues related to removing headland stack in the spring.

Response: Change made. Consistent with NRCS Standard 313, the Department has modified stacking restrictions to allow stacks created during the winter to remain in place for up to 8 months. Given the benefits of avoiding surface applications of solid manure during February and March and avoiding compaction to promote infiltration, stacking criteria and other permit requirements provide adequate protection for waters of the state.

106. Comment: A producer disagreed with the need to have Department approval if the protective siting criteria are met. Amend the rule to allow for stacking without burdensome process of DNR approval if the above criteria are met.

Response: No change made. The Department recognizes that there are potential risks associated with manure stacking that warrant Department approval of sites.

107. Comment - We note that NRCS 313, Table 9 prevents a permittee from stockpiling more than 40,000 cubic feet at one site. This is approximately 750 tons and all permitted CAFOs are likely to produce much more than 750 tons during the proposed two month high risk application prohibition period. We note this conflict and suggest the Department develop language in the rule to address it.

Response: No change made. We believe the limitation on stack size in NRCS Standard 313 helps minimize potential water quality impacts.

108. Comment: A properly designed stacking site with good soils and safe conditions should be provided the same conditions as a concrete storage unit built to 313 standards. We understand that DNR feels it would be desirable to have all facilities build 313 stacking pads, but if the headland stacking sites are environmentally sound, why penalize producers for stacking manure in the field? In lieu of storage during February and March, the Department should allow stacking of the manure.

Response: Partial change made. See response to comment #99 of this section.

109. Comment: Delete references to allowing manure to be stacked on hydrologic group D soils. All of the Hydrologic group D soils in Door County would be considered a WQMA and thus the allowance to stack on Hydrologic group D soils conflicts with state WQMA restrictions.

Response: No change made. Stacks must meet all criteria contained in the code; therefore, stacking on Hydrologic group D that is also a WQMA is not allowed.

110. Comment: We need the ability to headland stack during times of the year when cropping or weather does not allow field spreading and incorporation. This includes most of the following months- January, February, March, June, April, July, August, September and December.

Response: No change made. For manure with a solids content greater than 32%, the Department may approve stacking during non-winter months on a case-by-case basis.

111. Comment: Use 32% solid content for all stacking requirements to avoid confusion.

Response: No change made. The Department has split up stacking allowances in accordance with NRCS Standard 313 for a number of reasons. A primary reason is that the Department believes stacking of manure with a solids content of 32% or less during winter months and allowing those stacks to remain in place for up to 8 months is an acceptable practice in exchange for reducing applications of manure in the winter. However, potential risks associated with stacking of this manure during non-frozen or snow-covered ground conditions are not warranted. Manure with solids of more than 32% presents an acceptable level of risk of runoff or leaching during non-frozen or snow-covered ground.

<u>NR 243.142 – Distributed Manure</u>

112. Comment: A producer group commented that WDNR exceeds its authority by regulating land application of manure on non-CAFO owned or controlled lands under NR 243 rather than NR 151. Although the legislature vested the WDNR with a broad grant of authority, this authority is limited by the legislature's explicit order to the WDNR to regulate point sources no more stringently than the effluent limitations developed by EPA. The EPA regulations specifically indicate that CAFOs that transfer manure to other persons are not responsible for the preparation of a nutrient management plan ("NMP")

for these fields or for the over application of manure on these third-party fields. See 400 C.F.R. § 122.42(e). The CAFO must only prepare an NMP for those land application sites it owns or has operational control. Therefore, regulating third-party application of CAFO manure by requiring the NMP to address it is beyond the WDNR's statutory authority and instead NR 151's standards should apply to such land application sites. This position is strengthened by the recent *Waterkeeper* decision that a nutrient management plan constitutes an effluent limitation. The Department's approach in proposed s. NR 243.142 oversteps when it attempts to place limits on a CAFO's ability to distribute manure or to otherwise require a CAFO's NMP cover fields that are neither owned nor controlled by the CAFO.

Response: No change made. The Department's proposed rules do not limit or prohibit a CAFO from distributing its manure. Rather, the proposed rules delineate when the CAFO is responsible for distributed manure and when the manure must be applied in accordance with the WPDES permit terms and conditions. For the past twenty years, the Department's policy has been that the generator of the waste material (manure or process wastewater) is ultimately responsible for the handling of the waste (there are a few exceptions, e.g. if it is given to another WPDES permittee, de minimus amounts, if it will be distributed for some other purpose not involving cropland such as landscaping purposes). Moreover, if the Department were to follow the comment's suggested approach, then any CAFO could give all of its manure away or sell all of its manure for a low cost to another entity and then all of this manure would no longer be regulated by chapter NR 243 and potential water quality impacts would not be addressed. The comment suggests that this distributed manure is then subject to regulation under chapter 151; however the comment fails to recognize that if it is subject to chapter NR 151, the state or a local unit government would then have to provide cost sharing to make sure the CAFO generated manure is spread under a nutrient management plan and that plan would not meet the requirements of NR 243.

As for the legal arguments, the Department does not believe the issue is whether a nutrient management plan is an "effluent limit". The issue is the scope of activities subject to WPDES permit coverage. As stated in several other comment responses, the restriction in s. 283.11(2) does not prohibit the Department from regulating activities that EPA does not regulate - see *Maple Leaf Farms, Inc. v. State Department of Natural Resources*, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720. In the Maple Leaf Farms case, the CAFO challenged the DNR's authority to regulate the land application of manure on off-site croplands. One aspect of Maple Leaf's challenge was based on the uniformity provision contained in Wis. Stat. § 283.11(2).

The CAFO took the position that the DNR could not impose permit conditions on activities that were not also regulated in the Clean Water Act, and that because the Clean Water Act does not regulate off-site manure spreading, the uniformity provision had the effect of precluding the DNR from imposing permit conditions on the activity. The DNR asserted that it had the authority to regulate off-site spreading based on state law, regardless of whether the CWA regulated the activity or not, and that the uniformity provision did not apply in this instance because the permit conditions in question were "neither standards nor effluent limitations per se." In its decision, the Court agreed with the DNR that the uniformity provision applies "only where the federal program regulates the activity in question, for example, where the EPA has imposed specific discharge limits for defined categories of industrial discharges and the DNR has superimposed more stringent limits. It would not apply where the federal government has chosen not to regulate at all." (¶ 16)

113. Comment: Comments were received in opposition to the requirement to meet NRCS Standard 313 standards for distributing manure to other parties. A related comment indicated that a more practical and environmentally sensitive proposal would tie the storage to the ability of the product to not leach. Some products meet the headland stacking requirements of the proposed regulations.

Response: No change made. The proposed code requires that manure distributed as a commercial product or for alternative uses be delivered to proper storage. Proper storage is defined as a facility that complies with NRCS Standard 313 or other methods of storage that will not impact water quality. For certain situations and types of products, NRCS Standard 313 storage may not be required. This

requirement is intended to ensure that water quality impacts associated with the distribution of manure do not occur at the site where distributed manure is stored.

114. Comment: I do not believe they have any jurisdiction over manure transported out of Wisconsin.

Response: Change made. A note was added to this effect in s. NR 243.142.

115. Comment: A CAFO wants to be able to manipulate the manure to sell it as a commercial product and qualify for an exemption under NR 243.142, rather than having to give it away or sell it to another person who then manipulates the manure.

Response: Change made. An allowance for a permittee to manipulate the manure and qualify for an exemption under s. NR 243.142 has been added to the code.

116. Comment: We know wet distiller's grain, wet brewer's grain, and other by products from industrial processes are sold throughout the state with no requirement on these industries to verify and be responsible for the facilities that store their product. I believe the standards at a minimum should be consistent.

Response: NR 243 has no authority over the distribution of these products if they are unrelated to CAFO operations.

243.15 - Designed structures

117. Comment: As with nutrient management plan amendments, we believe a presumptive approval step should be allowed given current Departmental staffing, work load and the potential significant expansion of the number of facilities covered by the WPDES permit program if the Department rejects our other comments above.

Response: No change made. The Department reviews plans and specifications for CAFO operations under s. 281.41, Stats., which provides the Department 90 days to review plans. Failure to act within this timeframe constitutes approval of the plans.

118. Comment: A number of environmental advocacy groups and individual citizens proposed to shorten the compliance date for large CAFO construction of 180 day storage. A number of comments indicated that the compliance date should be 2008 rather than 2010, since most CAFOs have six months of storage already, to avoid rule complexity, to avoid potential impacts to water quality and public health, and to reduce the competitive advantage of those operations that haven't constructed storage. Others commented that the prohibition should be done sooner on a case-by-case basis.

Response: See responses to comment #23, section II.

Solid storage

119. Comment: Smaller farms do not have the economic ability to build manure facilities for solid manure; therefore the imposing of a regulation to limit spreading of solid manure for part of the year is dramatic to many producers.

Response: No change made. The proposed storage requirements apply primarily to permitted large CAFOs and will not impact smaller farms that are not required to obtain a WPDES permit.

120. Comment: Two comments were received specifically in support of 2 months storage for solid manure.

Response: No change made. Thank you for the comment.

121. Comment: Why is storage for solid manure only required for two months and liquid for 6 six months? At the very minimum solid systems should be treated the same unless Department approval is granted for approved stacking sites and proof that winter spread manure will not affect waters of the state. Recommend 180 days of storage for all CAFO's if subject to a WPDES permit unless departmental approval is granted for solid systems containing 32% or greater solids.

Response: No change made. The Department has required 180-day storage for liquid manure in part because many large CAFOs currently have 180-day storage and because liquid manure is more likely to runoff during frozen or snow-covered ground conditions. The Department has not required 180-day storage for solid manure in part because of the cost of such storage and the fact that it is not the current practice among large CAFOs. In addition, for certain manures, operations have the option to stack solid manure instead of constructing storage. The Department's restrictions for manure stacking are consistent with NRCS Standard 313.

122. Comment: The feed storage requirements may need to be clarified to apply to open feed storage. Covered/closed feed bins shouldn't need plan and spec approval from the DNR.

Response: No change made. Approval of feed bins may or may not be subject to plan review. The need for review will be depend on what is stored in the bins, whether or not they are open, and if there is potential for leaching and/or runoff issues.

123. Comment: The 10% limit on outside sources of material to digesters and/or manure storage structures is not based on science. Digesters are fairly new to the livestock industry and everyone is learning of their limitations as well potential positive impacts. To limit the ability to increase sources of renewable energy from waste food grade products with the 10% limit seems irresponsible for the Department.

Response: No change made. The proposed rule does not place a 10% limit on materials added to digesters. The reference to materials that comprise 10% of the digester volume only identifies that the Department may place additional design and operational requirements on permittees that exceed the 10% threshold.

124. Comment: A comment indicated concerns about the requirement to have marks placed on the sidewalls of storage facilities. Any marks on the sidewalls will be covered over after the first fill and empty cycle. Putting a pole or similar device in the pit will result in the same thing.

Response: The marker requirement for the margin of safety level is mandated by federal CAFO rules. The Department will work with producers to determine the best means of placing marks on sidewalls for a given operation.

<u>Liquid storage</u>

125. Comment: Many producer and producer group comments were in opposition to the proposed 180-day storage requirement for liquid manure. A number of comments stated that with regard to storage, one size does not fit all. Comments referenced the federal rules which require that "adequate" storage be available. Wisconsin producers should be allowed, like their competitors in other states, to establish individually to the Department that the amount of liquid manure storage available is "adequate" to meet nutrient management restrictions given the uniqueness of a producer's operation and variations in the state's weather conditions. Other comments stated that the proposed storage requirements are too costly for many producers. Some comments stated that 2 – 3 months storage was sufficient, in part because it coincided with the "high-risk" winter period for February and March. Others commented that 180-day storage will cause more runoff in the spring as larger volumes and more farmers are on the road applying manure on fields before planting crops. In addition, weight limits on roads can cause additional problems for producers in the spring. Another comment referenced regulations for municipal wastewater and other industrial products, which also have environmental contaminants of concern, that allow spreading of these

materials throughout the winter months. The comment indicated that there is no scientifically defensible reason for this double standard.

Another comment proposed an alternative requirement whereby the Department would establish a six-month storage requirement unless a permittee can establish to the satisfaction of the Department that it has adequate storage for its operation, which may be less than six months capacity.

A limited number of producers supported the storage requirement, with one producer indicating that it was inconceivable to build a new farm without adequate storage and that six months is accepted since it's a Wisconsin winter, while another producer supported more storage.

A number of individual citizens and advocacy groups commented in support of the 180-day storage requirement for liquid manure. Comments indicated that six months storage will allow permitted operations to comply with other permit requirements and will eliminate the need for operations to empty storage facilities in the late winter, when the risk of runoff is greatest, and will prevent runoff to waters of the state and avoid fish kills and well contaminations. Comments also stated that most CAFOs already have 180 days of storage. Some comments stated that more than 180 days, up to a year's worth, of storage is needed.

Response: Partial change made. The Department has modified the proposed code to define adequate liquid manure storage as a minimum of 180 days of storage. The Department believes that requiring 180 days of liquid manure storage statewide is warranted based on the need to avoid liquid manure applications on frozen or snow-covered ground and saturated soil conditions and associated impacts to waters of the state. While February and March represent months that make applications of manure particularly risky for all manures, applying liquid manure is particularly risky when frozen or snow-covered conditions exist at all times in the winter. The environmental benefits, and economic justification for this requirement, is supported by the fact that most large CAFOs (up to 80%), already have at least 180 days of storage, some with more than 180 days of storage. It is possible that certain operations may require additional liquid manure storage in order to comply with NR 243 and avoid water quality impacts. The Department has included additional restrictions within the code which are also intended to address potential issues associated with spring applications (e.g., SWQMA restrictions, prohibition on applying on saturated ground, restrictions based on forecasted precipitation). In addition, many producers are currently addressing these issues (e.g., road bans, traffic, compaction, muddy roads) using equipment or methods of application (e.g., drag lines, additional storage) to avoid these issues.

The Department is only requiring 180-day storage for liquid manure, the type of winter spread material that has most often been associated with fish kills and well contaminations during winter months. As for other regulatory programs, the Department does require 6 months storage and prohibits surface application during frozen and snow covered conditions for municipal sludge. The Department is currently evaluating winter spreading restrictions for industrial wastewaters under NR 214. The Department has proposed to allow applications of process wastewater from CAFOs in accordance with NR 214 during winter months and has not proposed to require storage for these materials.

The requirement for six months storage is <u>not</u> more stringent than federal regulations. EPA requires that CAFOs have adequate storage, but they allowed states the flexibility to develop their own definitions of what constitutes adequate storage. EPA assumed that storage would be necessary and that states in northern climates would likely require more storage to meet the nutrient management restrictions. Moreover, EPA assumed that six months storage would be a minimum component for the federal requirement to have adequate storage. This is evidenced in the Cost Methodology Report prepared by EPA for the rules. With regard to fiscal impacts to producers, EPA assumed a minimum of six months storage. Also, in the federal register preamble, EPA mentioned that some northern states may need up to 270 days of storage – see federal register, p 7212, February 2003.

126. Comment: One producer group commented that the storage requirements conflict with the Administration's Grow Wisconsin Initiative and questioned the Administration's commitment to the growth of the dairy and livestock industry. This comment is based on concerns that storage requirements may well cap certain operations from ever considering expansion. In addition, the comment referenced the livestock siting standards proposed in ATCP 51, which would consider the square footage of manure storage facilities as a critical input variable (and potentially the limiting factor) in the calculation of odor management restrictions on a facility's ability to grow.

Response: The Department supports a healthy environment as well as a thriving agricultural sector and believes that the two are closely connected. The proposed revisions to NR 243 and changes that have been made to the code based on public comment, are intended to ensure operations can operate profitably and in a manner that protects public health and the environment. The number of permitted operations in Wisconsin has risen dramatically in Wisconsin over the last 5-6 years, with many of those operations constructing 180 days of storage. The Department also understands that the odor restrictions in the Livestock Siting Rule have been drafted to allow operations a great deal of flexibility to address potential odor impacts from their operations, including odors associated with storage, in order to promote growth in the livestock industry.

127. Comment: We do not need more expensive storage facilities, but more farmer education and better ways of using the facilities we have.

Response: No change made. The Department agrees that producer education is a key component of avoiding water quality impacts. However, the Department also believes that having adequate storage for liquid manure (180 days) is a necessary component of avoiding water quality impacts, especially during winter months.

128. Comment: Why is the department using the 100 year, 24-hour storm event for swine, veal and poultry? Many Swine finishing barns have storage below the barn and rainfall does not get into the pits.

Response: No change made. The 100-year, 24-hour design standard is mandated by federal CAFO rules. However, if and operation has below barn storage and has no runoff directed to the storage structure, there is no need for additional design volume to address the 100-year, 24-hour storm.

129. Comment: If the WI DNR Water Division mandates storage of manure for the sake of protecting the waters of the state they should get automatic approvals for other permits that may be required by these mandates, including those required by other Department programs or local or state agencies.

Response: No change made. NR 243 has no jurisdiction to mandate automatic approvals from other permit programs or other locate or state requirements. Air regulations have not typically been an issue for most CAFOs constructing storage. Limiting required storage to liquid manure and not all solid manure, is expected to have benefits for operations that are regulated under the Livestock Siting Rule and local requirements.

<u>NR 243.17 – O & M</u>
130. Comment: I support the requirement to have six months storage by December 1 of each year.

Response: Thank you for the comment.

<u>NR 243.19-Monitoring and Reporting</u>
131. Comment: A number of comments from producers and producer groups commented that they were concerned that the reporting, inspections and recordkeeping requirements were significantly expanded under the proposed rule and questioned if all the requirements were necessary. Comments expressed concern that permit holders that were doing a good job of applying and keeping the manure and nutrients where they belong were being punished by the increased requirements. Comments also expressed

concern that the "paper work" burden on producers doesn't provide liability protection, doesn't protect water quality, serves only as an enforcement trap, and puts permitted farms at an economic and competitive disadvantage due to the extra costs and reduced time spent on improving operations. Comments recommended ensuring that requirements harmonize with federal rules, simplifying the requirements and allowing operations to use their own recordkeeping system, particularly for operations with good compliance records.

Response: While codified inspection, monitoring and reporting requirements have been expanded, many of the codified requirements have already been included in WPDES permits. In part, the code revision effort was intended to ensure more consistent inspection, monitoring and reporting requirements for land application activities as well as include the federally required daily and weekly inspections (which have been in WPDES issued and reissued permits since 2003). Inspection, monitoring and reporting requirements serve two key functions; (1) to determine whether an operation is in compliance with a permit and (2) to provide a permittee certain protections in the case of discharges, inspections or complaints. The WPDES permit program relies heavily on permittee self monitoring, inspection and reporting. The Department has limited land application requirements to those items that are deemed necessary to determine permit compliance based on years of Department experience regulating land application activities from CAFOs. In addition, the federal CAFO rule only allows discharges from the production area provided the permittee has met inspection and reporting requirements. While these requirements do serve an important role in cases of permit noncompliance, permittee records can also help determine if a given permittee did or did not contribute to identified water quality impacts and can help Department staff respond to complaints about an operation.

The Department is committed to minimizing the potential economic and time disadvantage associated with the monitoring and reporting requirements. For example, the Department has been working with the developers of SNAP Plus software to include an annual report for nutrient management and is working to create a standardized monitoring and inspection form for production area requirements.

The Department has limited ability to reduce these requirements under NR 243 in light of federal requirements and compliance issues. However, other programs, such as the Department's "Green Tier" program, may provide more flexibility.

132. Comment: The record keeping that will be required by these farmers will be very time consuming, not only for the permit holder but also for the DNR personnel who has to review these records.

Response: No change made. Department staff review and use information submitted by permittees on a frequent basis as part of its efforts to determine permit compliance.

133. Comment: A number of comments questioned why records must be kept for 5 years.

Response: Federal CAFO rules mandate records be kept for 5 years. This helps to ensure and document long-term compliance.

134. Comment: Can anyone conduct inspections or does an "official" need to conduct inspections?

Response: No change made. Production area and land application inspections and record keeping requirements can be done by the permittee or designee and does not need to be an "official." In some instances the code or permit may require inspections during the construction of facilities or evaluations of existing facilities be completed by a registered professional engineer or a person with similar qualifications.

135. Comment: Monitoring and reporting requirements may be the biggest area of change for most CAFOs and planners. The staff of the Discovery Farms Program is willing to help develop reporting materials and educate producers on how to maintain records. If we can be of assistance to the department

and the agricultural community, we are willing to work together to develop a system that meets the needs of producers, agency personnel and the general public.

Response: No change made. The Department appreciates Discovery Farms' offer to assist in providing guidance to the agricultural community and is willing to work with the Discovery Farms Program to improve tools to facilitate compliance with monitoring and reporting requirements.

136. Comment: A number of producers commented that they did not believe that weekly inspections of liquid storage structures were necessary.

Response: No change made. Weekly inspections are mandated under federal CAFO rules, regardless of the level in the storage structure.

137. Comment: A number of comments indicated that it is not necessary to record each day a storage facility is below the 180-day level indicator.

Response: Change made. The code has been revised to require recording of the day the 180-day level indicator was visible between October 1 and November 30.

138. Comment: Producer/producer group comments did not indicate opposition to the requirement for managing mortality. However, comments were received in opposition to recording/reporting management of animal mortality. It was suggested that a blanket statement of how animal carcasses are handled should be allowed or that records be kept on a yearly, not daily basis. A comment was received that the record keeping obligation serves no environmental protection benefit and only serves as a trap for the unwary in enforcement cases. One comment expressed concern that on large operations, the record keeping obligation is burdensome and could be misused by opponents for purposes of a negative public relations campaign against the operation.

Response: No change made. Federal CAFO rules require records on management of animal mortality. Prior to going to public hearing on the rules, the Department removed requirements to record the mortality numbers in response to concerns about how the information would be used.

139. Comment: Quarterly, not weekly, inspections are appropriate for manure that has a solids content of greater than 32%.

Response: No change made. Weekly inspections are only required for liquid storage or containment structures.

<u>Small Business Analysis</u>

140. Comment: A number of comments were critical of the Department's Small Business Analysis. In particular, a producer group made the following comments:

- That the Department failed to include the estimated 275-325 additional dairy farms that would require a permit and the potential severe impacts on dairy operations that supplement income by contract poultry growing.
- That the Small Business Regulatory Review Board determined that the rule fails to meet five of the six statutory elements and failed to comply with portions of s. 227.14(2)(2m), and 227.1 14(2) and (3), Stats., as well as the underlying legislative mandates contained in those provisions of the Small Business Regulatory Flexibility Act.

The producer group requested that the Department withdraw and substantially rewrite the current proposed revisions to NR 243 in light of the rule's inconsistency with the Rules of Procedure of the Small Business Regulatory Review Board and, more generally, the underlying policy mandate of the Small Business Regulatory Flexibility Act (1983 Wis. Act 90).

Response: Some changes have been made to the Final Regulatory Flexibility Analysis/Small Business Analysis (attached to NR 243 Green Sheet package for adoption; also see attached "Fiscal Impact Report-Private Sector"). Also, revisions were made to the rules regarding the methodology for calculating the number of animal units at an operation. This reduced the number of small businesses subject to the WPDES permit coverage.

The Department disagrees that the comments provided by the Small Business Regulatory Review Board (SBRRB) requires that the Department withdraw its proposed rules. The Department believes that the comment has overstated many of the remarks from the SBRRB. The SBRRB did not state that the Department failed to satisfy five of the six elements of the threshold analysis. In four out of the six elements, SBRRB said it was uncertain or unclear as to whether the Department adequately addressed the threshold issues. Furthermore, there is no legal basis for withdrawing the entire rule package because SBRRB provided some comments on the small business analysis and on the rule package. However, the Department did address some of the questions and comments from SBRRB (see Department's responses to SBRRB comments) and some revisions have been made to the rules that will reduce impacts to CAFOs considered small businesses (e.g. change was made regarding the methodology for calculating the number of animal units at an AFO. This change will reduce the number of small businesses subject to WPDES permit coverage, and there will not be an additional 275-325 permits issued to CAFOs as some producer groups have alleged.

Finally, the SBRRB did request that the Department send them a copy of the comments received at the public hearing regarding certain issues, and so the Department will send the SBRRB a copy of this green sheet package (which contains a summary of the public comments received and the Department's responses).

Also, see responses to the SBRRB comments in section IV.